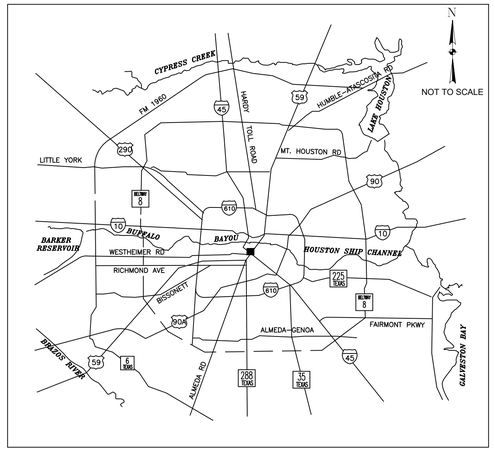
CITY OF HOUSTON

HOUSTON PUBLIC WORKS

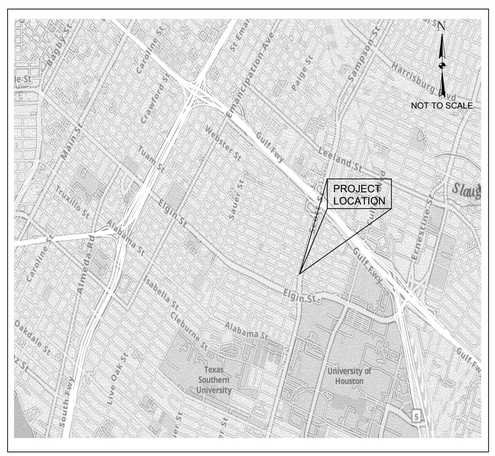
CAPITAL PROJECTS

LIFT STATION REHABILITATION AND RECONSTRUCTION DESIGN - SCOTT ST. LIFT STATION No. 1

WBS NO. R-000267-0127A-3



LOCATION MAP



VICINITY MAP
KEY MAP NO 493Z
GIMS MAP NO 5456C

TDLR EABPR _____

MAYOR
JOHN WHITMIRE

CONTROLLER
CHRIS HOLLINS

DISTRICT COUNCIL MEMBERS

AMY PECK, DISTRICT A
TARSHA JACKSON, DISTRICT B
ABBIE KAMIN, DISTRICT C
CAROLYN EVANS-SHABAZZ, DISTRICT D
FRED FLICKINGER, DISTRICT E
TIFFANY D. THOMAS, DISTRICT F
MARY NAN HUFFMAN, DISTRICT G
MARIO CASTILLO, DISTRICT H
JOAQUIN MARTINEZ, DISTRICT I
EDWARD POLLARD, DISTRICT J
MARTHA CASTEX-TATUM, DISTRICT K

COUNCIL MEMBERS AT-LARGE

JULIAN RAMIREZ, POSITION 1
WILLIE DAVIS, POSITION 2
TWILA CARTER, POSITION 3
LETITIA PLUMMER, POSITION 4
SALLIE ALCORN, POSITION 5

QUIDDITY ENGINEERING
2322 W GRAND PARKWAY, SUITE 150, KATY, TX 77449
832-913-4000
TX FIRM NUMBER: 23290

SURVEYED BY:
FB NO.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E
P.E. Serial No.: 125999
Date: JULY 2025

PARKS-FORESTRY DEPT.

METRO

HOUSTON WATER

TRANSPORTATION & DRAINAGE OPERATIONS

CAPITAL PROJECTS

SURVEY

CITY ENGINEER DATE

DIRECTOR OF HOUSTON PUBLIC WORKS DATE

SHEET NO XX OF XX SHEETS

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

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NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: APRIL 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

INDEX

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-G-2 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\MISCD-2.dwg, 4/5/2025 10:46:28 AM, WRS

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

GENERAL CONSTRUCTION NOTES:

1. Prior to bidding the project, the Contractor is required to visit the project sites. Contractor shall note any visible conflicts not shown in the drawings and bring to the attention of the Engineer prior to bidding the project. Should a construction conflict occur due to a visible conflict apparent at the time of bidding, all construction and engineering costs associated with the change shall be borne by the Contractor.
2. Final grade all areas of the site as shown on the paving and grading layout after completion of all other construction activities. Thoroughly clean the site to remove all construction debris such as concrete rubble, rebar, etc. Hydromulch all areas which are disturbed during construction that are not to be paved.
3. Provide isolation joints between all proposed sidewalks and all slabs, structures and pavements. Also provide isolation joints where pipes penetrate concrete slabs or pavement. Isolation joints shall be constructed as shown in the construction drawings.
4. Contractor shall comply with O.S.H.A regulations and Texas state law concerning trench safety systems.
5. Unless otherwise shown on the construction drawings, all pipe centered in walls shall have a wall flange. All wall flanges shall be cast–in–place with structural concrete or grouted in block–outs with non–shrink grout. All block–outs for through–wall piping shall be keyed, unless otherwise noted.
6. Sanitary facility clearances to potable water facilities shall follow the latest rules and regulations of the Texas Commission of Environmental Quality.
7. Contractor shall be responsible for obtaining all applicable city, county, state and federal permits.
8. The Contractor shall be fully responsible for any and all damage to the existing public or private utility lines, including but not limited to water lines, wastewater collection systems, storm sewers, gas line, telecommunication line, etc. during construction. All damages shall be repaired in accordance with City of Houston, Department of Public Works and Engineering's "Standard Construction Specifications" with latest addenda and amendments thereto, with no cost to the public and/or owner of the utility.
9. Contractor shall contact City of Houston, Department of Public Works and Engineering a minimum of 48 hours before starting work.
10. Contractor will be responsible for the coordination of power service to the lift station.
11. Contractor shall maintain site drainage during the course of construction at all times at no additional costs to the Owner whether by grading or pumping.
12. Contractor to obtain all permits required by regulation of Harris County, Texas for Flood Plain Management prior to starting construction.
13. All waste materials (hazardous and non–hazardous) shall be removed from the site and properly disposed of by the Contractor.
14. Contractor shall be responsible for protecting, maintaining, and restoring all existing facilities or any off–site areas affected by this construction project to existing or better condition, unless otherwise noted, at no additional cost to the Owner.
15. The Contractor is responsible for providing red line record drawings and O&M manuals acceptable to the Engineer at the completion of this project, as per the specifications, prior to final payment.
16. During construction, the Contractor shall maintain adequate drainage and safe access to adjacent properties, regardless of the weather conditions. Do not obstruct roadways, drainageways, sidewalks, or passageways adjacent to the construction area.
17. This project is inside the City of Houston Limits and Harris County, Texas.
18. The approximate location of existing utilities are given for reference only. Before commencing the work on this contract, the Contractor shall verify by field investigation the actual locations of all utility facilities within and adjacent to the limits of the work that may be affected by the work. Conflicts which result due to the negligence by the Contractor to locate, horizontally and vertically, existing utilities which are shown on the construction drawings, or which the Contractor has been given notice or has knowledge of, shall be the sole responsibility of the Contractor. The cost of remedial work, removal of portions of the work or extensive design changes occasioned by the failure of the Contractor to verify the location of existing utilities as described above shall be borne by the Contractor.
19. Electrical material and equipment listed approval. No electrical materials, apparatus, devices, appliances, fixtures, or equipment shall be sold or installed in the city unless they are in conformance with the provisions of this code, the laws of the State of Texas and any applicable rules and regulations issued under the authority of the stat statutes. The maker's name, trademark, or other identification symbol shall be placed on all electrical materials, apparatus, devices, appliances, fixtures, and equipment used or installed under the provisions of this code.
20. All electrical materials and equipment shall be listed and labeled for intended use and shall be included in a list published by an approved agency. Show compliance on Electrical Drawings.
21. Section 508 City of Houston Electrical Code.
19. Contractor is to contact the Texas811 at 811 or 1–800–344–8377 for location of existing facilities that may not be shown on the plans at least 2 working days prior but not more than 14 working days prior to commencement of any construction activities.
20. The Contractor shall provide concrete tankage that is free of substantial leakage and wetting of exterior surfaces.
21. The existing public roadway and onsite pavement shall be maintained in accessible and usable condition during the course of the work. Vehicular access to the existing lift stations must be maintained at all times. The Contractor shall repair damage to the road from construction traffic.
22. During construction, the Contractor shall maintain pedestrian and vehicular access to all adjacent properties. Access shall be maintained during all weather conditions. Any temporary facilities needed to maintain roadway accessibility during construction operations shall be incidental to the contract.
23. All existing structures, sidewalks, stairways, handrail, slabs, piping, and piping supports that must be disturbed shall be replaced and/or rebuilt to pre–construction condition or better.
24. The Contractor shall provide isolation kits between mechanical elements constructed and all dissimilar metals.

SANITARY SEWER NOTES:

1. All sewers shall be constructed in accordance with the City of Houston "Standard Construction Specifications for Wastewater Collection Systems, water lines, storm drainage, street paving, and traffic"and all current amendments thereto and be subject to a standard Exfiltration test. Tests are to be performed on the total footage of sewer line included in the project. Requirements of Texas Administrative Code, Title 30 Chapter 317, "Design Criteria for Sewerage Systems"shall govern where conflicts exist except where city requirements are more stringent.
2. All manholes are to be per City of Houston standard details drawing numbers 02082–01, 02082–02, 02082N–02, 02082–03, and 02082N–03 unless otherwise noted. Use 2010 version as applicable.
3. Sanitary sewer manholes will have bedding and backfill per City of Houston standard details drawing No. 02317–08 unless otherwise noted.
4. Sanitary sewer pipe 6"and smaller shall be schedule 40 pvc. sanitary sewer pipe 8" and larger shall be SDR–26 PVC.
5. All SDR–26 PVC pipe shall meet ASTM specification D3034 and use "Full Bodied" SDR–26 PVC fittings with appropriate adapters and shall have a cell classification of 12364–B as defined in ASTM D–1784 and shall have DIP size OD and rubber gasket bell–and–spigot type joint ends, unless otherwise noted.
6. AWWA C–900 DR–18 PVC pipe uses either AWWA C900 DR–18 PVC fittings or DIP fittings.
7. All sanitary sewer lines under proposed or future pavement and to a point one (1) foot back of all proposed or future curbs shall have bedding per City of Houston standard details drawing numbers 02317–01, 02317–02, or 02317–03 as applicable, with 1 ½sack cement/cy stabilized sand backfill up to the bottom of the pavement subgrade. 100 psi performance results are still required.
8. All sanitary sewers crossing water lines with a clearance between 12 inches and 9 feet shall have a minimum of one 18' joint of 150 psi ductile iron or (green) c900 PVC pipe meeting ASTM specification D2241 centered on water line. When water line is below sanitary sewer provide minimum 2 foot separation.
9. Contractor shall provide a minimum horizontal clearance of 9' feet between water lines and sanitary sewer manholes and lines.
10. Sanitary sewer manhole rims outside of proposed paving will be set 3"– 6"above the surrounding level finished grade after paving with sloped backfill added for storm water to drain away from manhole rim.
11. In wet stable trench areas use bedding per city of houston standard details drawing number 02317–02 (2002).
12. Deflection Test: Deflection tests shall be performed on all flexible and semi–rigid sewer pipe. the test shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5% if the deflection test is to be run using a rigid Mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The test shall be performed as per 30 TAC 317.2 latest amendment and without mechanical pulling devices. No ball–type Mandrel is allowed.
13. Infiltration, Exfiltration or Low–Pressure Air Test: Either of the following tests shall be performed as per TAC, Title 30 317.2 within the specified tolerances on all gravity sewers.

A. Onfiltration or exfiltration test: total leakage as determined by a hydrostatic head test shall not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two (2) feet.

B. Low–pressure air test: perform test according to UNI–B–6–90 or other appropriate procedures. for sections of pipe less than 36"(inch) average inside diameter, the minimum allowable time for pressure drop from 3.5 p.s.i.g. to 2.5 p.s.i.g. shall be as follows:
6"340 seconds or 0.855(L) for test lengths greater than 398'
8"454 seconds or 1.520(L) for test lengths greater than 298'
10"567 seconds or 2.374(L) for test lengths greater than 239'
15"850 seconds or 5.342(L) for test lengths greater than 159'
18"1020 seconds or 7.693(L) for test lengths greater than 133'

Where L = length of line of same pipe size in feet.

14. "San. S. E."indicates "Sanitary Sewer Easement"
15. For sanitary manhole (MH) rims set inside of or @ curb & gutter pavement and/or below T.C., MH rims will be set flushed with an abutting paved surface. The (Valcun, Neenah or equal) heavy duty bolted solid MH cover shall be properly (and securely) attached and sealed to its compatible gasketed frame by using both a Neoprene Gasket and (at least) 4 counter–sunk hex–head coarse threaded ½"–13 UNC stainless steel bolts. The heavy duty frame MH cover shall be solid (no air holes). Said frame shall be both embedded into the MH's top also securely anchored to the underlying MH structure with either securely attached embedded anchor bolts or the concrete MH's exposed rebars welded to the frame or other equally secured methods to prevent MH cover/frame blow–offs/ejections.
16. Maintain 12–inch minimum clearance between all sanitary sewers, storm sewers and culverts unless otherwise noted.
17. Sanitary sewer manholes shall be sealed unless otherwise noted. Air–release manholes shall not be sealed.
18. Manhole rims are to be set at the elevations shown on the plans initially. After paving and grading is completed, rims are to be adjusted to four (4) to six (6) inches above final grade and back–dressed with dirt to provide drainage away from the manhole. Manholes located within proposed pavement shall have a rim elevation equal to the road elevation.
19. If wet sand is encountered in the field, use special bedding per City of Houston DWG 02317–01, 02317–02 and as directed by the Engineer.
20. Perform CCTV survey after post installation of all new sanitary sewer lines and submit the videos to the City of Houston according to City of Houston guidelines.
21. All sewer lines shall be tested in accordance with the contract specifications. Contractor to furnish test plugs and risers (no separate pay).
22. For all PVC or DIP pipe, use manhole waterstop gasket and clamp assembly at manhole connections to new manholes (no separate pay). Connection to existing manholes shall consist of breaking out an opening, installing a flexible connection (grout in place with a water stop around the perimeter) and use of a manhole waterstop gasket and clamp assembly of manhole connections.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: APRIL 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
JOB NO: 00050–0099–01 DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

GENERAL CONSTRUCTION NOTES
SHEET 1 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 0–G–3 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

INSPECTION NOTES:

1. A field demonstration of the system and equipment shall be verified by the City of Houston Wastewater group before the start of the seven (7) day pump test. Wastewater will also inspect duct banks before the concrete is poured.
2. The City of Houston Wastewater group shall be given 24 to 72 hours prior notice to needing any inspections.

WATER LINES:

1. Water lines shall be constructed in accordance with the latest City of Houston infrastructure design manual, standard specification, and construction details.
2. All water lines under proposed or future paving and to a point of one (1) foot back of all proposed or future curbs shall be encased in bank sand to 12" over pipe and backfilled with cement stabilized sand to within one (1) foot of subgrade.
3. All water line and sewer line crossings shall be constructed per City of Houston and TECQ regulations.
4. All water valves shall be supplied and INS talled in accordance with the latest edition of AWWA C-500 and shall be of the resilient seat type.
5. All water lines to be disinfected in conformance with AWWA C-651 and the Texas State Department of Health. At least one bacteriological sample shall be collected for every 1,000 linear feet of water line and shall be repeated if contamination persists.
6. All below grade valves shall be gasketed, hub-end gate valves with a cast iron box, except where flanges are called out on the plans.
7. Hydrostatic Testing: All water pipe shall be tested for leakage in accordance with the latest City of Houston standard construction specifications. Tests are to be performed on the entire footage of water pipe line included in the project.
8. All water lines to have 4' minimum cover to finished grade and minimum 12" clearance to other utilities at crossing unless otherwise noted on plans. All water line installed over 8' deep shall utilize restrained joint fittings.
9. Contractor shall keep water pipe clean and capped (or otherwise effectively covered) open pipe ends to exclude insects, animals or other sources of contamination from unfinished pipe lines at times when construction is not in progress.

GRADING NOTES:

1. General Contractor and all Subcontractors shall verify the suitability of all existing and proposed site conditions including grades and dimensions before starting construction. The Engineer shall be notified immediately of any discrepancies.
2. Before starting construction, Contractor shall verify benchmark elevation and notify engineer if any discrepancy and/or conflict is found.
3. Contractor shall ensure there is positive drainage from the proposed buildings and no ponding in paved areas, and shall notify engineer if any grading discrepancies are found in the existing and proposed grades prior to placement of pavement or utilities.
4. Contractor shall protect all manhole covers, valve covers, vault lids, fire hydrants, power poles, guy wires, and telephone boxes that are to remain in place and undisturbed during construction.
5. All existing concrete paving, sidewalk, and curb demolition shall be removed and disposed of by Contractor. Disposal shall be at an approved off-site, lawful location, unless directed otherwise by the Owner.
6. Contractor to provide any additional select fill for final grading of site.
7. Areas that are to receive fill will be stripped to a depth of three-inches (3"). Strippings shall be stock piled and then spread evenly on surface of fill areas.
8. Fill shall be placed in maximum loose lifts of eight-inches (8") or less and compacted to 95% of maximum density at optimum to +3% moisture content as determined by AASHTO Test Method T-99.

SIGNAGE NOTES:

1. Provide identification numbers for each pump within the Lift Station sites which correspond to the identification numbers in the motor control center, PLC, and control panel. These numbers shall be located on the vertical discharge pipes of the pumps or on the concrete top slab. The numbers shall consist of one coat of black polyurethane paint applied with a stencil. Number height shall be at least four-inches (4"). This applies to all proposed equipment and existing equipment at both Lift Station sites.
2. Label and coat with proper color code all lines including an arrow indicating flow direction. Labels shall consist of one coat of black polyurethane paint applied with a stencil. Letter height shall be a minimum of four inches (4"). Apply labels in a prominent location as directed by the Engineer. As a general rule, labels shall be provided for each pipe where it enters or exits a structure or pump. This shall be done for all proposed and existing pipes at both Lift Station sites.

MANHOLE / INLET PROTECTION NOTES:

1. Inlets and manholes that are not complete and/or are subject to conveying storm water flows are to be protected to prevent sediment from entering the proposed or existing storm sewer system.
2. Protection shall consist of one layer of 3x12-inch oak timbers, one (1) inch apart, covered with one layer of woven polypropylene or polyester filter fabric (Exxon GTF 100S, Phillips SUPAC 4WS[UV] or approved equal) held in place with 1/2" staples. Timbers shall be held in place with two (2) 2x4's nailed securely to each timber over the filter fabric. The filter fabric shall extend beyond the perimeter of the oak timbers as to ensure one (1) foot of bury between the manhole or inlet and the surrounding soil as shown.
3. Filter fabric to be cleaned or replaced when it ceases to function properly or as directed by the Engineer.
4. Contractor may submit plans for alternate methods of protection. These alternate methods must be approved prior to use in the field.
5. No separate payment shall be made for inlet and manhole protection. Include the cost in the unit price for the inlets and manholes.

UTILITY CONSTRUCTION NOTES:

1. During construction, the Contractor shall maintain adequate drainage and safe access to adjacent properties, regardless of the weather conditions. Do not obstruct roadways, drainageways, sidewalks, or passageways adjacent to the construction area.
2. When trench condition warrants the use of dewatering systems, their use shall be requested by the Contractor and approved by the Engineer.
3. Contractor shall remove all mud, dirt and debris deposited or dropped on existing pavement due to his construction activity daily. Material that is hazardous to traffic shall be removed immediately.
4. Contractor shall protect all trees adjacent to work area. No trees shall be removed without permission of the City.
5. The Contractor shall be responsible for safeguarding and protecting all material and equipment stored on the job site. The Contractor shall be responsible for the storage of materials in a safe and workmanlike manner to prevent injuries, during and after working hours, until project acceptance.
6. The Contractor shall provide sheeting, shoring and bracing necessary to protect workmen and existing utilities during all phases of construction, as may be required by O.S.H.A., federal, state and local laws, codes and ordinances.
7. The Contractor shall be fully responsible for any and all damage to the existing public or private utility lines, including, but not limited to, water lines, wastewater collection systems, storm sewers, backslope interceptors, irrigation lines, electrical lines, and material and property damages during construction. All damages, relocation, or replacement of existing utilities shall be repaired in accordance with the specifications, details, and requirements of the utility's Owner.
8. Project staking and establishment of control points will be provided by the Owner or their representative. Alignment, centerline curve data, and stationing to be determined from approved, recorded subdivision plat or road right-of-way. The Contractor will be responsible for coordinating this work with the field project representative.
9. The Contractor shall return all existing paving and driveways to original or better condition at no additional cost to the owner unless otherwise noted or specifically called out as a pay item.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

GENERAL CONSTRUCTION NOTES
SHEET 2 OF 3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX
CATEGORY NO. 0-G-4 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

EQUIPMENT ABBREVIATIONS:

ABWF	AUTOMATIC BACKWASH SAND FILTER
AF	AIR INLET FILTER
AL	AIR LIFT
ASV	AUTOMATIC SWITCHOVER VALVE
BC	BELT CONVEYOR
BP	BELT PRESS
CC	CALIBRATION COLUMN
CFP	CENTRIFUGAL PUMP
CLR	CHLORINATOR
CP	CHOPPER PUMP
CRB	CARBON SCRUBBER
DA	DECANT ARM
DDP	DOUBLE DISC PUMP
DF	DISK FILTER
DP	DIAPHRAGM PUMP
DWT	DOUBLE WALL STORAGE TANK
EFAN	EXHAUST FAN
EWS	EMERGENCY EYEWASH & SHOWER
FBD	FINE BUBBLE DIFFUSER
FLT	FLOATS
GEN	GENERATOR
GIP	GAS INDUCTION PUMP
GLS	GAS LEAK SENSOR
GR	GRINDER
HEP	HORIZONTAL END-SUCTION PUMP
HST	HOIST
INJ	INJECTOR
JIB	JIBB CRANE
LC	LOAD CELL
LCP	LOCAL CONTROL PANEL
LVR	LOUVER
MCS	MECHANICAL COARSE SCREEN
MFS	MECHANICAL FINE SCREEN
MR	MONORAIL
MS	MANUAL SCREEN
MSB	MULTI-STAGE CENTRIFUGAL BLOWER
MXR	MIXER
PBU	POLYMER BLENDING UNIT
PCP	PROGRESSIVE CAVITY PUMP
PD	PULSATION DAMPENER
PSP	PERISTALTIC PUMP
RCTW	RECTANGULAR WEIR
RDT	ROTARY DRUM THICKENER
RLB	ROTARY LOBE BLOWER
RLP	ROTARY LOBE PUMP
RSB	ROTARY SCREW BLOWER
RTB	REGENERATIVE TURBINE BLOWER
RTM	ROTAMETER
RTV	ROTAMETER WITH INTEGRAL MANUAL VALVE
SC	SECONDARY CLARIFIER
SCC	SCREW CONVEYOR
SCP	SUBMERSIBLE CHOPPER PUMP
SDD	COARSE BUBBLE SINGLE DROP DIFFUSER
SFAN	SUPPLY FAN
SFR	SULFONATOR
SHTR	SPACE HEATER
SM	SUBMERSIBLE MIXER
SNP	SOLENOID PUMP
SP	NON-CLOG SUBMERSIBLE PUMP
SPP	SELF-PRIMING CENTRIFUGAL PUMP
STMX	STATIC MIXER
SWT	SINGLE WALL STORAGE TANK
TB	TRAVELING BRIDGE
TBB	TURBO BLOWER
TEFC	TOTALLY ENCLOSED, FAN-COOLED MOTOR
TLY	TROLLEY
VLF	VACUUM LIQUID FEEDER
VNW	V-NOTCH WEIR
VR	VACUUM REGULATOR
WBD	COARSE BUBBLE WIDE BAND DIFFUSER
WC	WASHER COMPACTOR
WCH	WINCH

FLUID ABBREVIATIONS:

AIR	AIR
ALUM	ALUM
BW	BACKWASH WASTE
CAKE	DEWATERED SLUDGE
CE	CLARIFIED EFFLUENT
CLG	CHLORINE GAS
CLS	CHLORINE SOLUTION
DR	DRAIN LINE
DS	DIGESTED SLUDGE
FA	FOUL AIR
FE	FINAL EFFLUENT
FRA	FRESH AIR
FTE	FILTERED EFFLUENT
FTR	FILTRATE
IR	INTERNAL RECYCLE
ML	MIXED LIQUOR
NPW	NON-POTABLE WATER
OF	OVERFLOW
POLY	POLYMER
PRM	PERMEATE
PS	POLYMER SOLUTION
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RCW	RECLAIMED WATER
RS	RAW SEWAGE
SB	SODIUM BISULFITE
SCUM	SCUM
SDS	SULFUR DIOXIDE SOLUTION
SH	SODIUM HYPOCHLORITE (BLEACH)
SI	SCREENED INFLUENT
SN	SUPERNATE
SO2	SULFUR DIOXIDE GAS
STM	STORM SEWER
TS	THICKENED SLUDGE
WAS	WASTE ACTIVATED SLUDGE

GENERAL ABBREVIATIONS:

AC	ACRES
CL	CENTERLINE
CFM	CUBIC FEET PER MINUTE
EL	ELEVATION
FF	FINISHED FLOOR
FM	FORCE MAIN
FPS	FEET PER SECOND
FT	FEET
GAL	GALLONS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HOA	HAND OFF AUTO
HP	HORSE POWER
HR	HOUR
LF	LINEAR FEET
mA	MILLIAMP
MH	MANHOLE
OFB	OVERFLOW BAFFLE
PP	POWER POLE
ROW	RIGHT-OF-WAY
SMC	SAMPLE COCK
SAN	SANITARY SEWER
SCH	SCHEDULE
SF	SQUARE FEET
TDH	TOTAL DYNAMIC HEAD
TOB	TOP OF BANK
TOC	TOP OF CONCRETE
TOE	TOE OF SLOPE
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TELEPHONE PEDESTAL
TSP	TELEPHONE SERVICE POLE
TSS	TOTAL SUSPENDED SOLIDS
UFB	UNDERFLOW BAFFLE
UGE	UNDERGROUND ELECTRIC
V	VOLTS
VOL	VOLUME
WM	WATER METER

GATES, VALVES & FITTINGS ABBREVIATIONS:

3WV	THREE WAY VALVE
ARV	AIR RELEASE VALVE
AVV	AIR & VACUUM VALVE
BCV	BALL CHECK VALVE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BPV	BACKPRESSURE VALVE
BS	BASKET STRAINER
BV	BALL VALVE
CCV	CUSHION CHECK VALVE
DAE	DOUBLE ARCH EXPANSION JOINT
DBS	DUPLEX BASKET STRAINER
DBV	DUCKBILL VALVE
DCV	DOUBLE DISC CHECK VALVE
DDC	DOUBLE DETECTOR CHECK
DGV	DEGASSING VALVE
DJ	DISMANTLING JOINT
DV	DIAPHRAGM VALVE
EC	EXPANSION COUPLING
FAC	FLANGED ADAPTER COUPLING
FPG	FLAP GATE
FPV	FLAP VALVE
FTV	FOOT VALVE
GLB	GLOBE VALVE
GV	GATE VALVE
HB	HOSE BIBB
KGV	KNIFE GATE VALVE
MC	MECHANICAL COUPLING
MQC	MALE CAM & GROOVE QUICK COUPLING
MV	MUD VALVE
NRS	NON-RISING STEM
NV	NEEDLE VALVE
OCV	ODOR CONTROL VALVE
OSY	OUTSIDE STEM & YOKE
PG	PULL GATE
PNV	PINCH VALVE
PR	PRESSURE REDUCING VALVE
PRV	PRESSURE RELIEF VALVE
PSV	PRESSURE SUSTAINING VALVE
PV	PLUG VALVE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SCK	SILENT CHECK VALVE
SCV	SWING CHECK VALVE
SG	SLIDE GATE
SLC	SLEEVE COUPLING
SRV	SURGE RELIEF VALVE
SV	SOLENOID VALVE
TBA	TUBING ADAPTER
TV	TELESCOPIC VALVE
UN	UNION
VB	VACUUM BREAKER
WG	WEIR GATE
WYS	WYE STRAINER

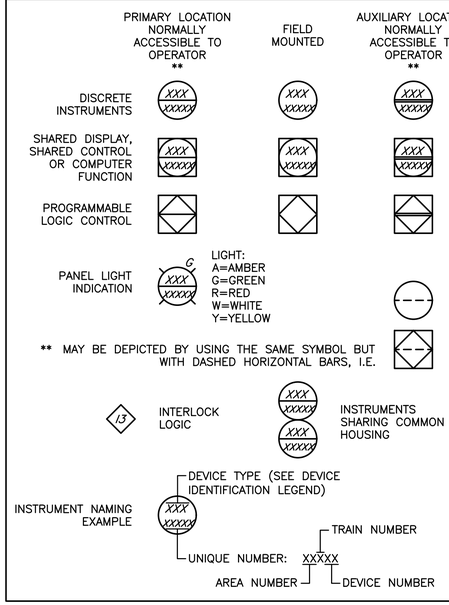
MATERIAL ABBREVIATIONS:

CFRP	CENTRIFUGALLY CAST FIBER REINFORCED PIPE
CMP	CORRUGATED METAL PIPE
DI	DUCTILE IRON
FRP	FIBERGLASS REINFORCED PLASTIC
GS	GALVANIZED STEEL
HDG	HOT DIP GALVANIZED
PE	POLYETHYLENE
PVC	POLYVINYL CHLORIDE
RC	REINFORCED CONCRETE
SS	STAINLESS STEEL
ST	STEEL
WS	WELDED STEEL

INSTRUMENTATION ABBREVIATIONS:

A/H	AUTO/HAND
DC	FULL VOLTAGE DISCONNECT
DOP	DOPPLER FLOW METER
ES	EMERGENCY STOP
H/O/A	HAND/OFF/AUTO
H/O/R	HAND/OFF/REMOTE
L/A	LOCAL/AUTO
L/C	LOCAL/COMPUTER
L/O/C	LOCAL/OFF/COMPUTER
L/O/R	LOCAL/OFF/REMOTE
L/R	LOCAL/REMOTE
LS	LOCK STOP
LSR	LASER LEVEL TRANSDUCER
MAG	ELECTROMAGNETIC FLOWMETER
N/B	NORMAL/BYPASS
O/O	ON/OFF
O/C	OPEN/CLOSE
O/C/LOS	OPEN/CLOSE/LOCK-OUT-STOP
O/C/S	OPEN/CLOSE/STOP
O/C/S/C	OPEN/CLOSE/STOP/COMPUTER
O/H/C	OPEN/HOLD/CLOSE
O/O/A	ON/OFF/AUTO
O/O/C	ON/OFF/COMPUTER
PRP	PROPELLER OR TURBINE FLOWMETER
RAD	RADAR LEVEL TRANSDUCER
R/S/L	RAISE/STOP/LOWER
S/S	STOP/START
SUB	SUBMERSIBLE LEVEL TRANSDUCER
TRM	THERMAL MASS FLOWMETER
TRT	TRANSIT TIME FLOWMETER
ULT	ULTRASONIC LEVEL TRANSDUCER

GENERAL INSTRUMENT & FUNCTION SYMBOLS



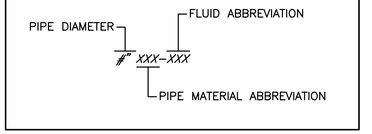
DEVICE IDENTIFICATION LEGEND

FIRST LETTER			SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE		MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION				
C	CONDUCTIVITY			CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAUGE		GLASS, VIEWING DEVICE		
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHED.	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOTION	MOMENTARY			MIDDLE
N	INTRUSION				NORMAL
O	TORQUE		ORIFICE, RESTRICTION		OPENED
P	PRESSURE, VACUUM		POINT CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VALVE, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OF PRESENCE	Y-AXIS		RELAY, COMPUTE CONVERT	
Z	POSITION	Z-AXIS		DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	

ANALYZER ABBREVIATIONS:

DO	DISSOLVED OXYGEN
NO3	NITRATE
OP	ORTHOPHOSPHATE
ORP	OXIDATION REDUCTION POTENTIAL
TSS	TOTAL SUSPENDED SOLIDS
TURB	TURBIDITY

PIPING LABELS:



NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: APRIL 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

GENERAL SYMBOLS & ABBREVIATIONS SHEET 1 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. O-G-5 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\MISCD-2.dwg, 4/5/2025 10:49:48 AM, WRS

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

MISCELLANEOUS SYMBOLS

- TYPICAL NORMALLY CLOSED VALVE
- PLUG VALVE
- BALL VALVE
- BUTTERFLY VALVE
- SILENT CHECK VALVE
- SWING CHECK VALVE
- CUSHION CHECK VALVE
- BALL CHECK VALVE
- MUD VALVE
- DUCKBILL VALVE
- DIAPHRAGM VALVE
- GATE VALVE
- DOUBLE DISC CHECK VALVE
- GLOBE VALVE
- ODOR CONTROL VALVE
- PINCH VALVE
- NEEDLE VALVE
- THREE–WAY VALVE
- FLAP VALVE
- TELESCOPIC VALVE
- FOOT VALVE
- AIR & VACUUM VALVE
- AIR RELEASE VALVE
- DEGASSING VALVE
- SOLENOID VALVE
- PRESSURE RELIEF VALVE
- SURGE RELIEF VALVE
- PRESSURE REDUCING VALVE
- PRESSURE SUSTAINING VALVE
- BACKPRESSURE VALVE
- AUTOMATIC SWITCHOVER VALVE
- VACUUM REGULATOR
- DRAIN LINE
- DRAIN INLET (SCREENED)
- DRAIN INLET (OPEN)
- VENT
- AIR INLET FILTER
- SLIDE GATE (NORMALLY OPEN)
- SLIDE GATE (NORMALLY CLOSED)
- PULL GATE (NORMALLY OPEN)
- PULL GATE (NORMALLY CLOSED)
- WEIR GATE
- OVERFLOW BAFFLE
- UNDERFLOW BAFFLE
- V–NOTCH WEIR
- RECTANGULAR WEIR
- TUBING ADAPTER
- BLIND FLANGE
- UNION
- SLEEVE COUPLING
- FLANGED ADAPTER COUPLING
- DISMANTLING JOINT
- DOUBLE ARCH EXPANSION JOINT
- AIR LIFT
- MALE CAM & GROOVE QUICK COUPLING
- DIAPHRAGM SEAL
- INLINE ANNULAR DIAPHRAGM
- SAMPLE COCK
- HOSE BIBB
- VACUUM BREAKER
- WYE STRAINER
- CORPORATION STOP
- GENERAL BACKFLOW PREVENTER
- BASKET STRAINER
- DUPLEX BASKET STRAINER
- EMERGENCY EYE WASH & SHOWER
- BLADDER TANK
- MIXER
- STATIC MIXER
- SINGLE WALL STORAGE TANK
- DOUBLE WALL STORAGE TANK
- STORAGE CONTAINER
- EXHAUST FAN
- LOUVER
- GENERAL FAN
- GENERAL CRANE
- WINCH
- TRAVELING BRIDGE CRANE
- TROLLEY
- HOIST
- GENERAL SCREEN
- WASHER COMPACTOR
- SCREW CONVEYOR
- BELT CONVEYOR
- COARSE BUBBLE SINGLE DROP DIFFUSER (PROFILE)
- SINGLE DROP COARSE AIR DIFFUSER (PLAN)
- FINE BUBBLE DIFFUSERS
- COARSE BUBBLE WIDE BAND AIR DIFFUSERS (PLAN)
- COARSE BUBBLE AIR
- FINE BUBBLE AIR
- MANHOLE
- GRINDER
- GENERAL BLOWER
- GENERAL PUMP
- HEAT TRACING
- CALIBRATION TUBE/COLUMN
- GAS INDUCTION PUMP
- INJECTOR
- ROTAMETER
- ROTAMETER WITH INTEGRAL MANUAL VALVE
- PULSATION DAMPENER
- CHEMICAL DOSAGE CONTROLLER (SEE FLUID ABBREVIATIONS)

ELECTRICAL/ INSTRUMENTATION SYMBOLS

- 120 VAC ELECTRICAL SUPPLY
- LEVEL TRANSDUCER (SEE INSTRUMENTATION ABBREVIATIONS FOR TYPE)
- FLOAT WITH PVC COATED WEIGHT
- FLOW METER (SEE INSTRUMENTATION ABBREVIATIONS FOR TYPE)
- ONLINE ANALYZER (SEE ANALYZER ABBREVIATIONS FOR TYPE)
- PROBE ANALYZER (SEE ANALYZER ABBREVIATIONS FOR TYPE)
- LOAD CELL/SCALE
- SPACE HEATER
- MOTOR
- VARIABLE SPEED MOTOR
- MOTOR WITH LOCAL LOCKOUT (SEE INSTRUMENTATION ABBREVIATIONS FOR TYPE)
- ELECTRICAL SIGNAL
- DATA COMMUNICATION
- HEAT TRACING
- ANALOG INPUT
- ANALOG OUTPUT
- DISCRETE INPUT
- DISCRETE OUTPUT

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: APRIL 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
JOB NO: 00050–0099–01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

GENERAL SYMBOLS & ABBREVIATIONS SHEET 2 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 0–G–6 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050–0099–01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MISCD–2.dwg, 4/5/2025 10:50:06 AM, WRS

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

STORM STRUCTURES:

Ⓐ STM. M.H.
TG=37.65'
FL=24.65' (36" N)
FL=25.95' (24" E)
FL=24.55' (36" S)

Ⓑ STM. M.H.
TG=39.23'
FL=31.73' (15" NE)
FL=34.53' (12" S)

Ⓒ STM. M.H.
TG=37.96'
FL=31.73' (24" W)
FILLED W/ TRASH

Ⓓ BB. INLET
TG=37.88'
FL=31.43' (24" N)
FL=31.43' (24" E)

Ⓔ STM. M.H.
TG=38.50'
FL=25.00' (36" N)
FL=28.80' (24" E)
FL=25.00' (36" S)
FL=29.40' (24" W)

Ⓕ BB. INLET
TG=38.05'
FL=31.35' (24" E)
FL=31.65' (24" S)

SANITARY STRUCTURES:

① SAN. M.H.
TR=37.85'
FL=28.80' (8" N)
FL=28.90' (8" E)

② SAN. M.H.
TR=39.22'
FL=28.14' (42" SE)
FL=28.04' (42" NW)

③ SAN. M.H.
TR=39.47'
FL=30.60' (42" N)
FL=30.50' (42" SE)
FL=31.00' (PIPE SET BACK W)

④ SAN. M.H.
TR=38.69'
FL=17.19' (8" N)
FL=27.29' (8" E)
FL=8.79' (42" S)
FL=9.19' (42" W)

⑤ SAN. M.H.
TR=40.69'
BOTTOM 40.05'

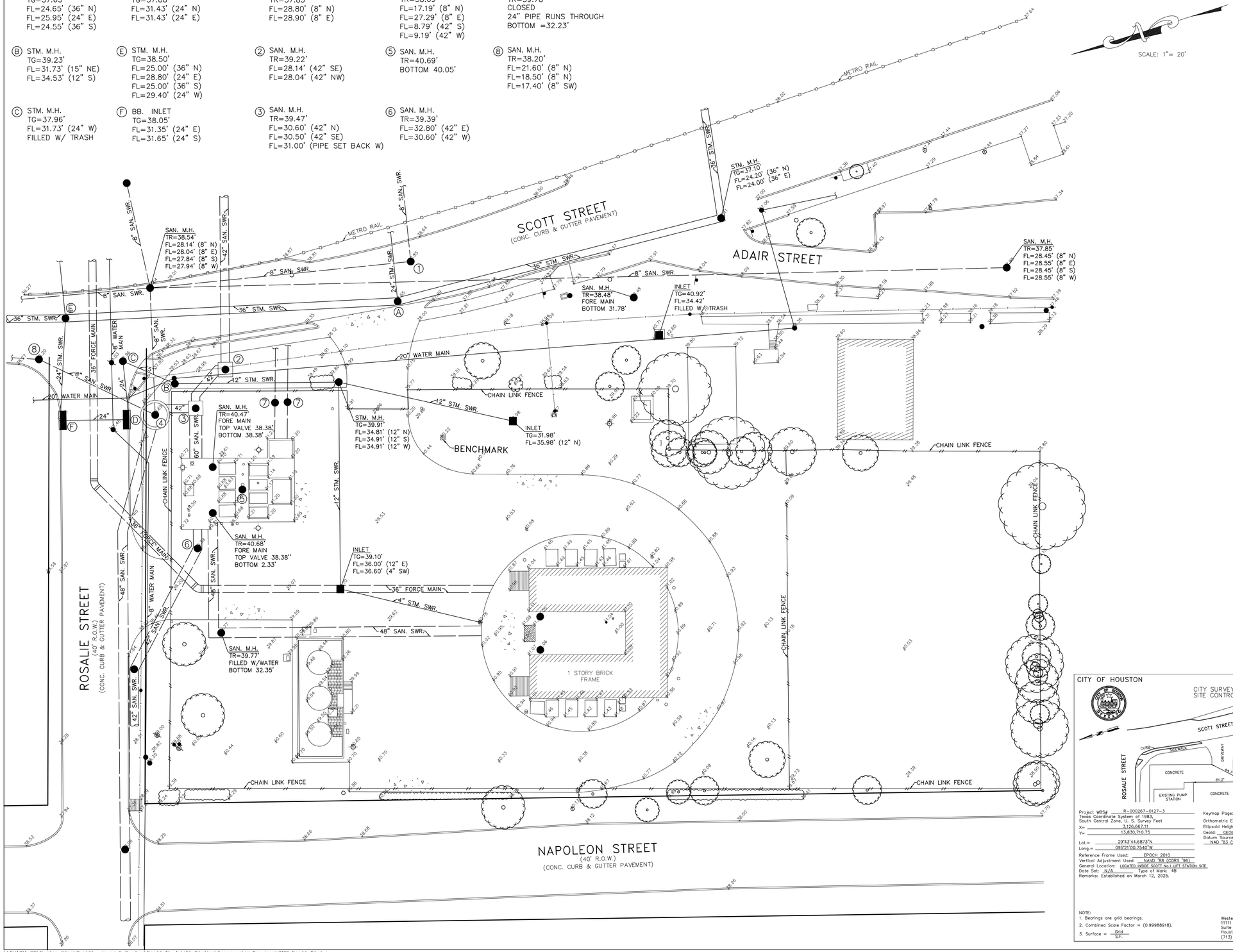
⑥ SAN. M.H.
TR=39.39'
FL=32.80' (42" E)
FL=30.60' (42" W)

⑦ SAN. M.H.
TR=39.78'
CLOSED
24" PIPE RUNS THROUGH
BOTTOM =32.23'

⑧ SAN. M.H.
TR=38.20'
FL=21.60' (8" N)
FL=18.50' (8" N)
FL=17.40' (8" SW)

BENCH MARK
SET BRASS DISC IN CONCRETE FOR CITY OF HOUSTON MARKER NO. LOCATED INSIDE CITY OF HOUSTON LIFT STATION NO.1 AT THE INTERSECTION OF SCOTT STREET AND ROSALIE STREET.

SCALE: 1"= 20'



NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date:
CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.
Signature Valid for six months.

Date:
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(Gas services lines are not shown). This signature not to be used for conflict verification.
Signature Valid for six months.

Date:
Approved for AT&T Texas / SWBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY:
JOB NO: 00050-0099-01 DWG BY:

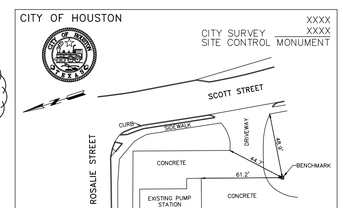
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION
REHABILITATION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: XXX VERT: XXX
CATEGORY NO. SHEET NO. OF XXX
FOR CITY OF HOUSTON USE ONLY

CITY OF HOUSTON XXXX
CITY SURVEY XXXX
SITE CONTROL MONUMENT



Project WBS# R-000267-0127-3
Texas Coordinate System of 1983, South Central Zone, U. S. Survey Feet
X= 3,126,667.11
Y= 13,830,710.75
Lat.= 29°43'44.6873"N
Long.= 095°21'00.7540"W
Reference Frame Used: EPOCH 2010
Vertical Adjustment Used: NAVD '88 (CORS '96)
General Location: LOCATED INSIDE SCOTT No.1 LIFT STATION SITE
Date Set: N/A Type of Mark: 4B
Remarks: Established on March 12, 2025.

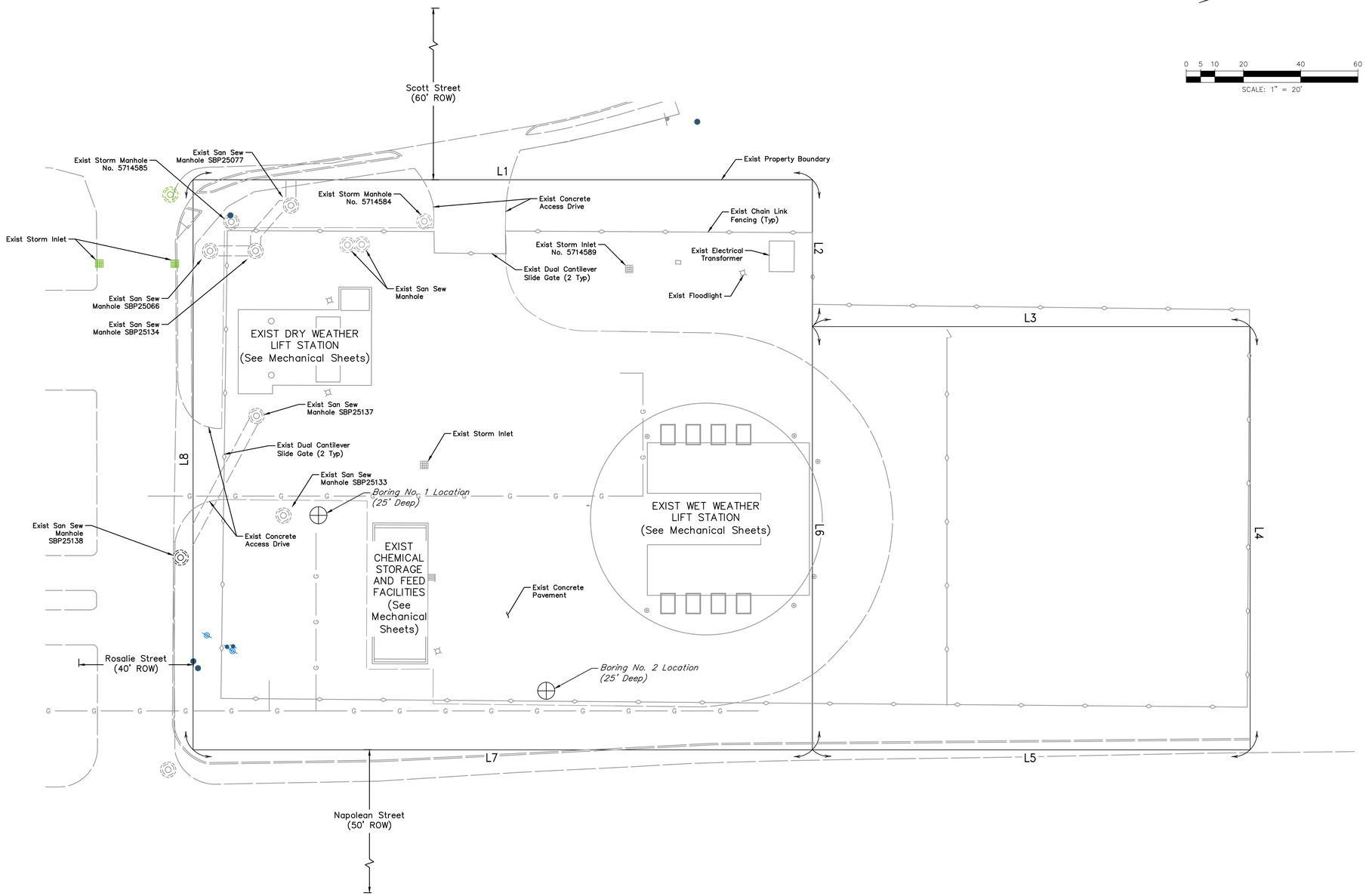
Keymap Page: 493Z
Orthometric Elevation = 40.21'
Ellipsoid Height =
Geoid: GEOID '18
Datum Source & Adjustment: NAD '83 (2011)

NOTE:
1. Bearings are grid bearings.
2. Combined Scale Factor = (0.99988918).
3. Surface = Grid / S.F.

Western Group Consultants
11111 Katy Freeway
Suite 525
Houston, TX 77079
(713) 465-6655

\\SHAZIA-PC\Master Files\Quiddity-Jones & Carter\Scott No. 1 Lift Station\Topographic Drawings\3100 Scott St.dwg

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 40 60
SCALE: 1" = 20'

FLOODPLAIN INFORMATION:
THIS TRACT LIES WITHIN UNSHADED ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY OF CITY OF HOUSTON, MAP No. 48201C0880M, PANEL 0880 OF 1150, SUFFIX "M" DATED JANUARY 6, 2017, FOR HARRIS COUNTY TEXAS AND INCORPORATED AREAS. UNSHADED ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

0.2% ANNUAL CHANCE FLOOD ELEVATION = 39.7'

1% ANNUAL CHANCE FLOOD ELEVATION = 37.3'

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

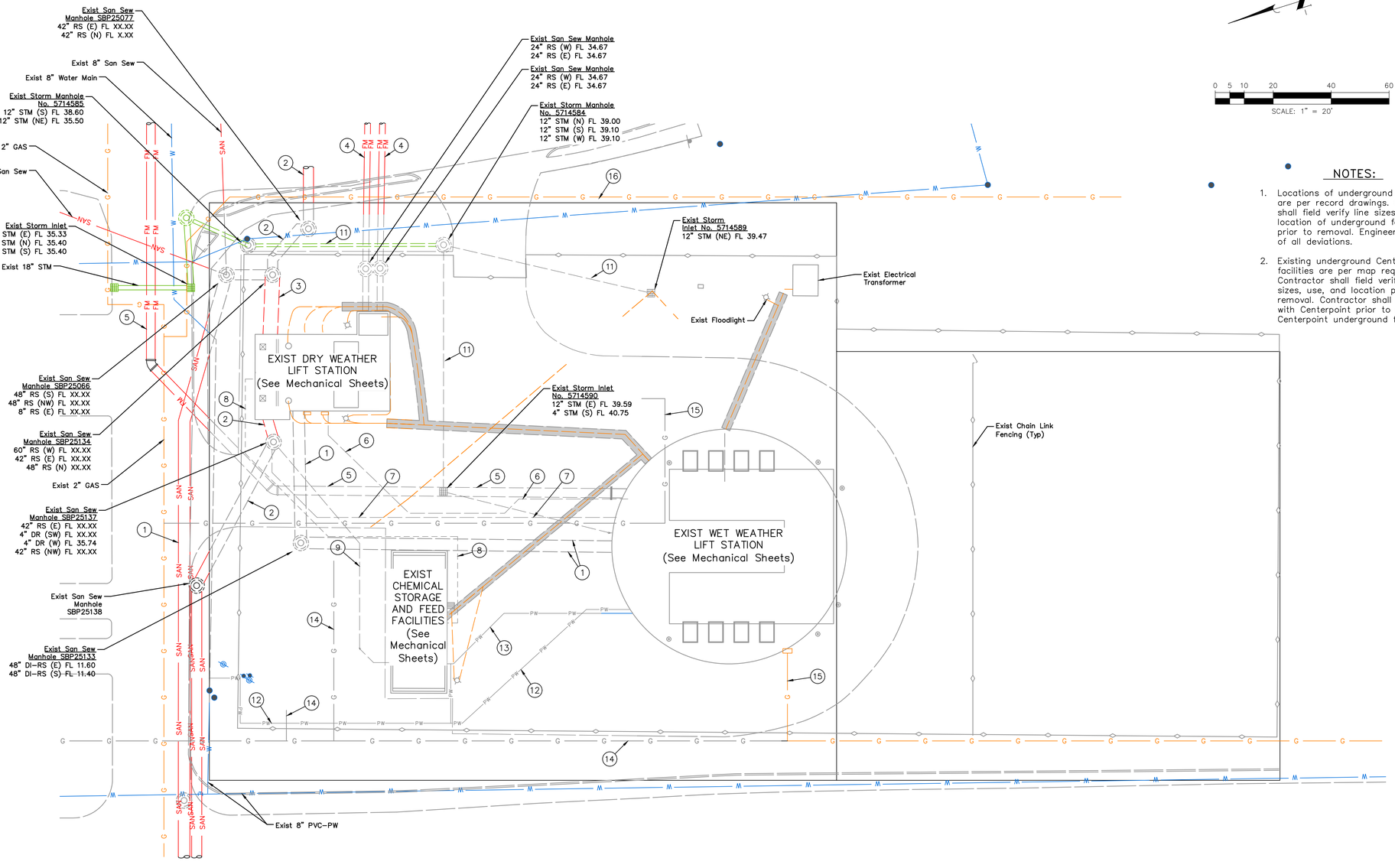
EXISTING SITE PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-2 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-EX.dwg, Jul 03, 2025 - 8:56am, sa2

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 40 60
SCALE: 1" = 20'

BENCHMARK:

xxx

TEMPORARY BENCHMARK:

xxx

NOTES:

1. Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
2. Existing underground Centerpoint facilities are per map request data. Contractor shall field verify the line sizes, use, and location prior to removal. Contractor shall coordinate with Centerpoint prior to removal of Centerpoint underground facilities.

KEYED NOTES BY SYMBOL "(#)":

KEY	DESCRIPTION
(1)	Exist 48" RS
(2)	Exist 42" RS
(3)	Exist 60" RS
(4)	Exist 24" DI-RS (Force Main)
(5)	Exist 36" DI-RS (Force Main)
(6)	Exist 6" DI-DR (Force Main)
(7)	Exist 4" RS
(8)	Exist 1/2" PE-FES in 3" PVC-CCP
(9)	Exist 4" DR
(10)	Exist 4" PVC-STM
(11)	Exist 12" STM
(12)	Exist 1-1/2" PVC-PW
(13)	Exist 1-1/4" PVC-PW
(14)	Exist 1-1/2" NAT GAS
(15)	Exist 3" NAT GAS
(16)	Exist 2" NAT GAS

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E

P.E. Serial No.: 125999

Date: JULY 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

EXISTING YARD PIPING PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

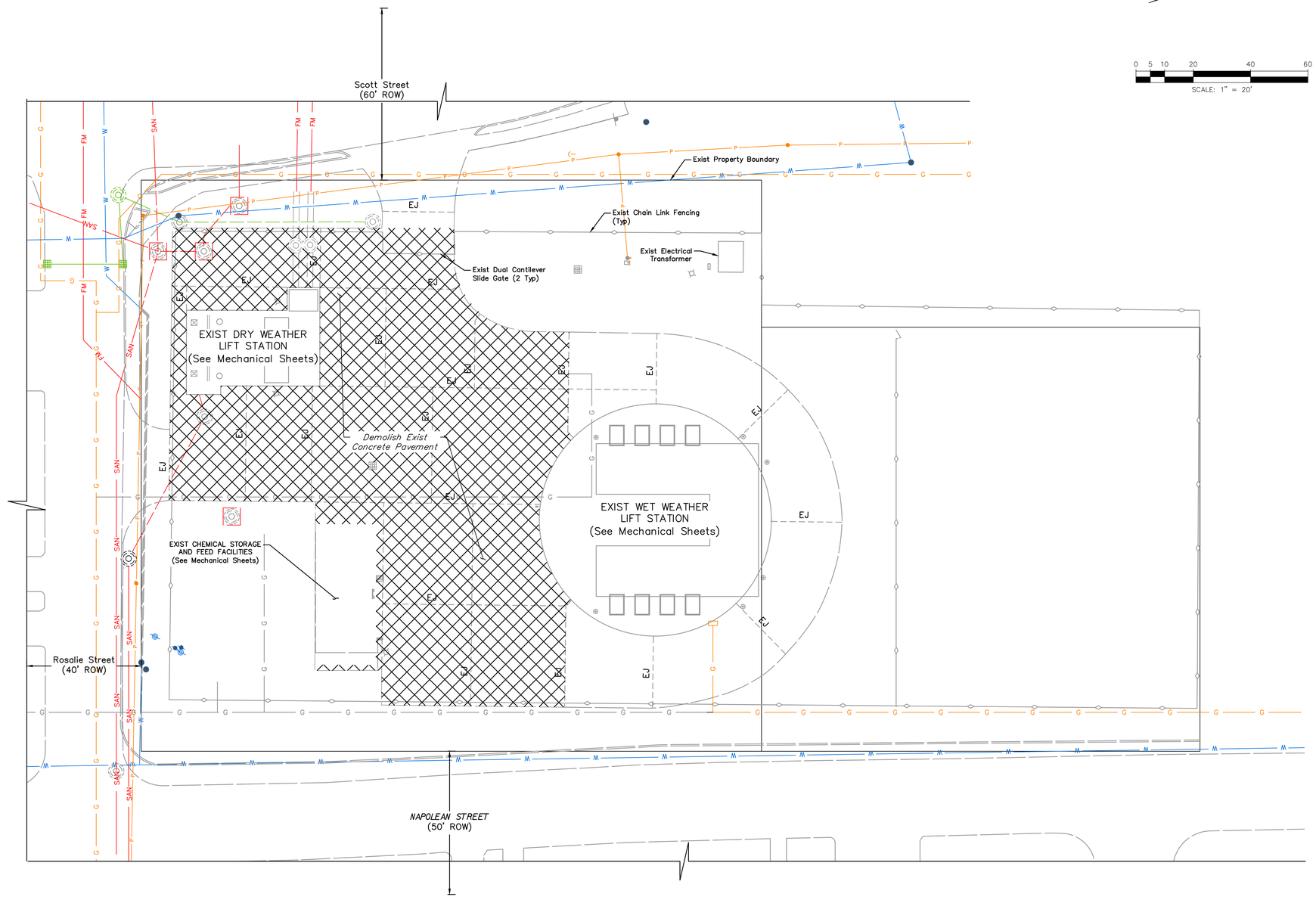
DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-3 SHEET NO. X OF XXX

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-EX.dwg, Jul 03, 2025 - 8:59am, sa2

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 40 60
SCALE: 1" = 20'

FLOODPLAIN INFORMATION:
THIS TRACT LIES WITHIN UNSHADED ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY OF CITY OF HOUSTON, MAP No. 48201C0880M, PANEL 0880 OF 1150, SUFFIX "M" DATED JANUARY 6, 2017, FOR HARRIS COUNTY TEXAS AND INCORPORATED AREAS. UNSHADED ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

0.2% ANNUAL CHANCE FLOOD ELEVATION = 39.7'

1% ANNUAL CHANCE FLOOD ELEVATION = 37.3'

LEGEND:

EJ — — — — Expansion Joint

Demolish

NOTES:

1. Contractor shall walk the site with a City representative prior to demolition to determine any items to be salvaged and returned by the City. Contractor shall not begin demolition on site without giving the City first right of refusal.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

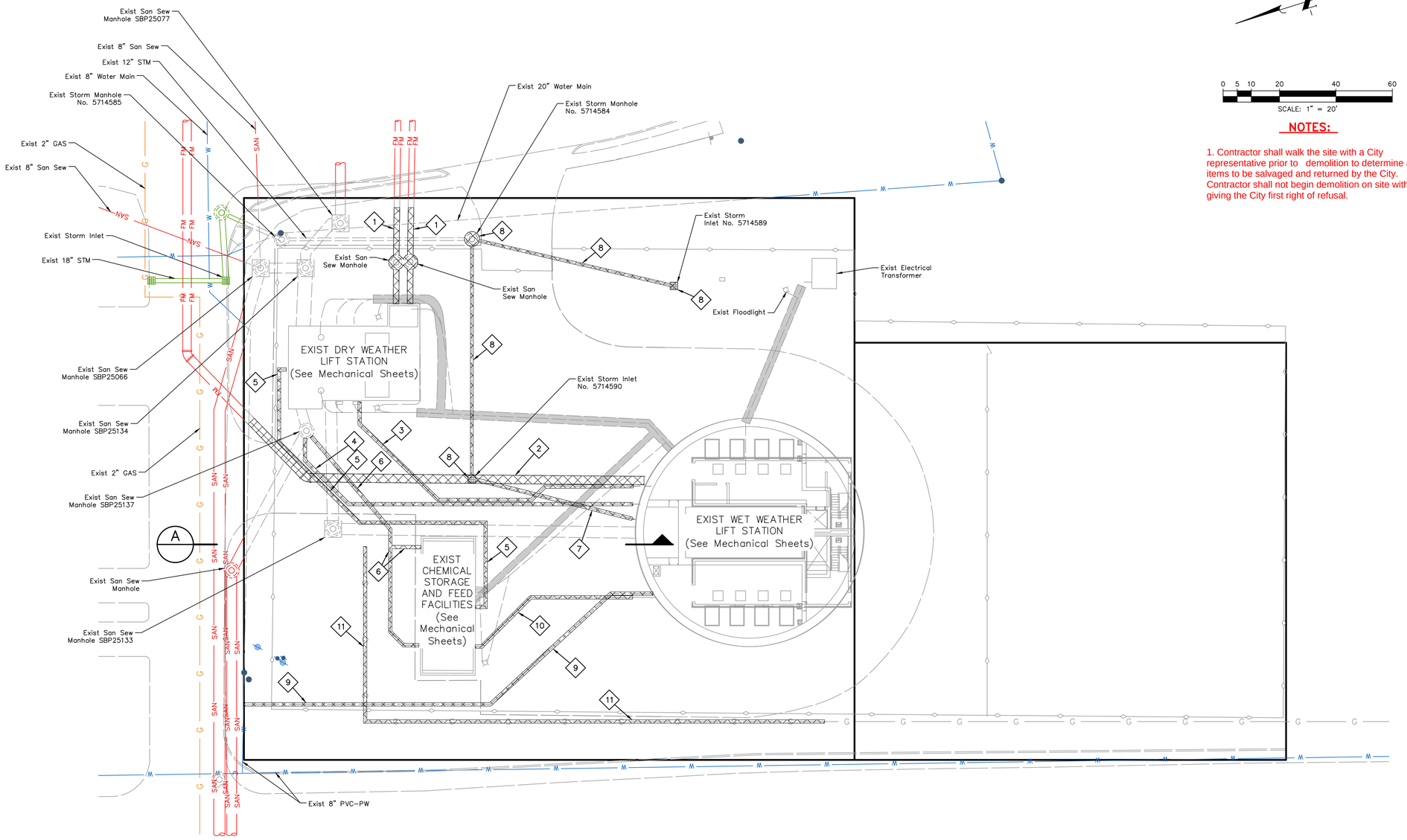
SCOTT STREET No. 1
LIFT STATION REHABILITATION

SITE DEMOLITION PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-4 SHEET NO. 4 OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NOTES:

1. Contractor shall walk the site with a City representative prior to demolition to determine any items to be salvaged and returned by the City. Contractor shall not begin demolition on site without giving the City first right of refusal.

BENCHMARK:

XXX

TEMPORARY BENCHMARK:

XXX

ITEMS OF WORK

No.	DESCRIPTION
1	Demolish Exist 24" DI–RS (Force Main) and San Sew MH from Dry Weather Pump Station up to 4' from east property boundary
2	Demolish Exist 36" DI–RS (Force Main)
3	Demolish Exist 6" DI–DR (Force Main) from Wet Weather Pump Station structure to Dry Weather Pump Station
4	Demolish Exist 4" San Sew from Wet Weather Pump Station structure to receiving San Sew Manhole
5	Demolish Exist 1/2" PE–FES in 3" PVC–CCP from Exist Chemical and Feed Storage Facility structure to Exist Dry Weather Pump Station structure
6	Demoish Exist 4" DR from Exist Chemical and Feed Storage Facility structure to receiving San Sew Manhole
7	Demolish Exist 4" PVC–STM from Exist Wet Weather Pump Station structure to receiving Storm Sewer Inlet
8	Demolish Exist Storm Sewer Inlet, Exist 12" Storm Sewer, and Exist Storm Sewer Manhole
9	Demolish Exist 1–1/2" PVC–PW from north property boundary to exist Wet Weather Pump Station structure
10	Demolish Exist 1–1/4" PVC–PW from Wet Weather Pump Station structure to Exist Chemical and Feed Storage Facility
11	Coordinate with Natural Gas Utility and demolish onsite natural gas

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: HARRY W. ISENSEE III, P.E.

P.E. Serial No.: 144401

Date: APRIL 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050–0099–01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

YARD PIPING DEMOLITION PLAN & SECTION

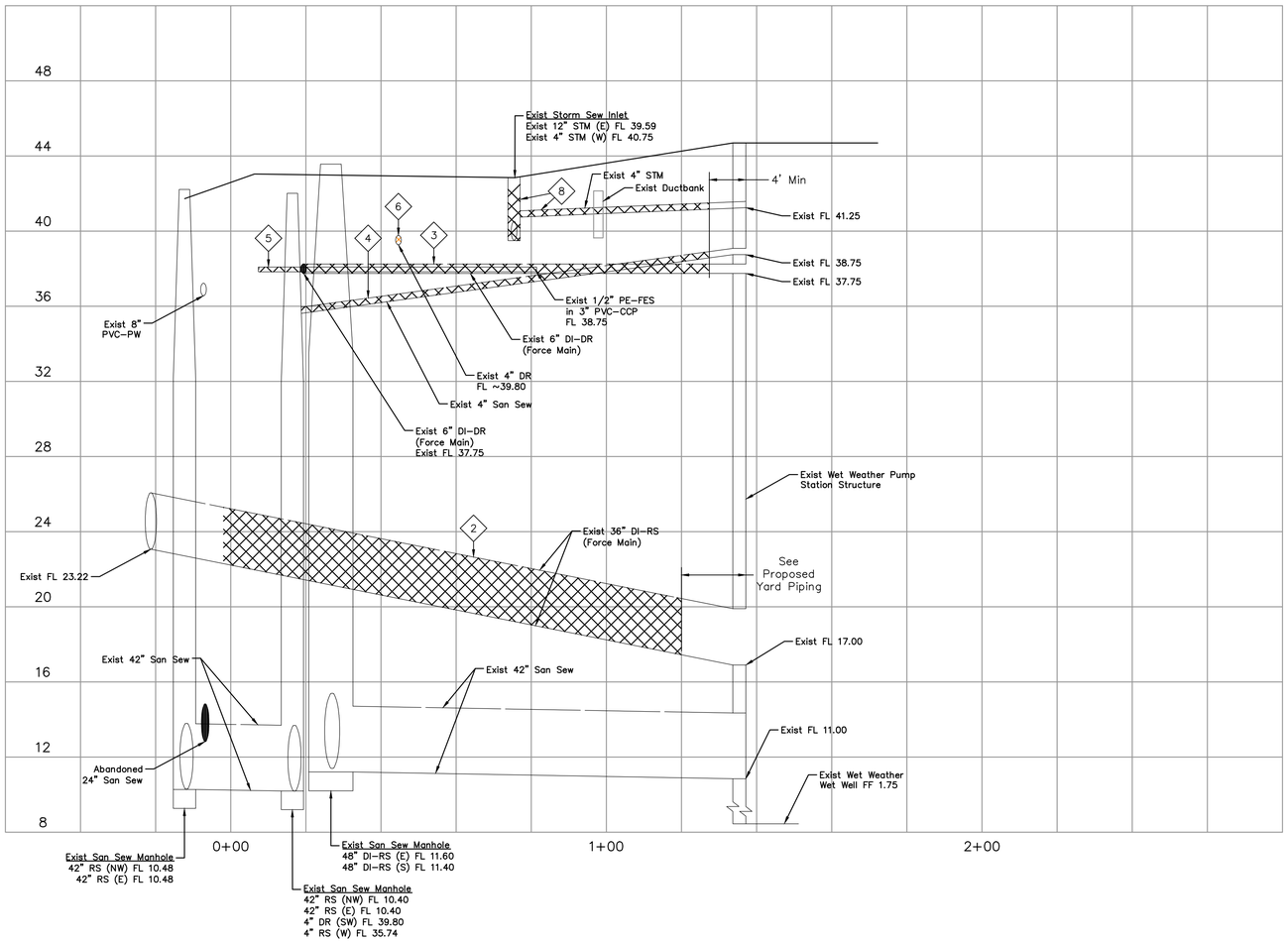
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX

CATEGORY NO. 0–C–5 SHEET NO. OF XXX

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050–0099–01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\CIVIL–EX.dwg, 4/2/2025 1:39:33 PM, ssomers



A
0-C-5

SECTION

SCALE: Horizontal 1" = 20'
SCALE: Vertical 1" = 4'

BENCHMARK:

xxx

TEMPORARY BENCHMARK:

xxx

ITEMS OF WORK

No.	DESCRIPTION
1	Demolish Exist 24" DI-RS (Force Main) and San Sew MH from Dry Weather Pump Station up to 4' from east property boundary
2	Demolish Exist 36" DI-RS (Force Main)
3	Demolish Exist 6" DI-DR (Force Main) from Wet Weather Pump Station structure to Dry Weather Pump Station
4	Demolish Exist 4" San Sew from Wet Weather Pump Station structure to receiving San Sew Manhole
5	Demolish Exist 1/2" PE-FES in 3" PVC-CCP from Exist Chemical and Feed Storage Facility structure to Exist Dry Weather Pump Station structure
6	Demoish Exist 4" DR from Exist Chemical and Feed Storage Facility structure to receiving San Sew Manhole
7	Demolish Exist 4" PVC-STM from Exist Wet Weather Pump Station structure to receiving Storm Sewer Inlet
8	Demolish Exist Storm Sewer Inlet, Exist 12" Storm Sewer, and Exist Storm Sewer Manhole
9	Demolish Exist 1-1/2" PVC-PW from north property boundary to exist Wet Weather Pump Station structure
10	Demolish Exist 1-1/4" PVC-PW from Wet Weather Pump Station structure to Exist Chemical and Feed Storage Facility
11	Coordinate with Natural Gas Utility and demolish onsite natural gas

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

YARD PIPING DEMOLITION SECTION

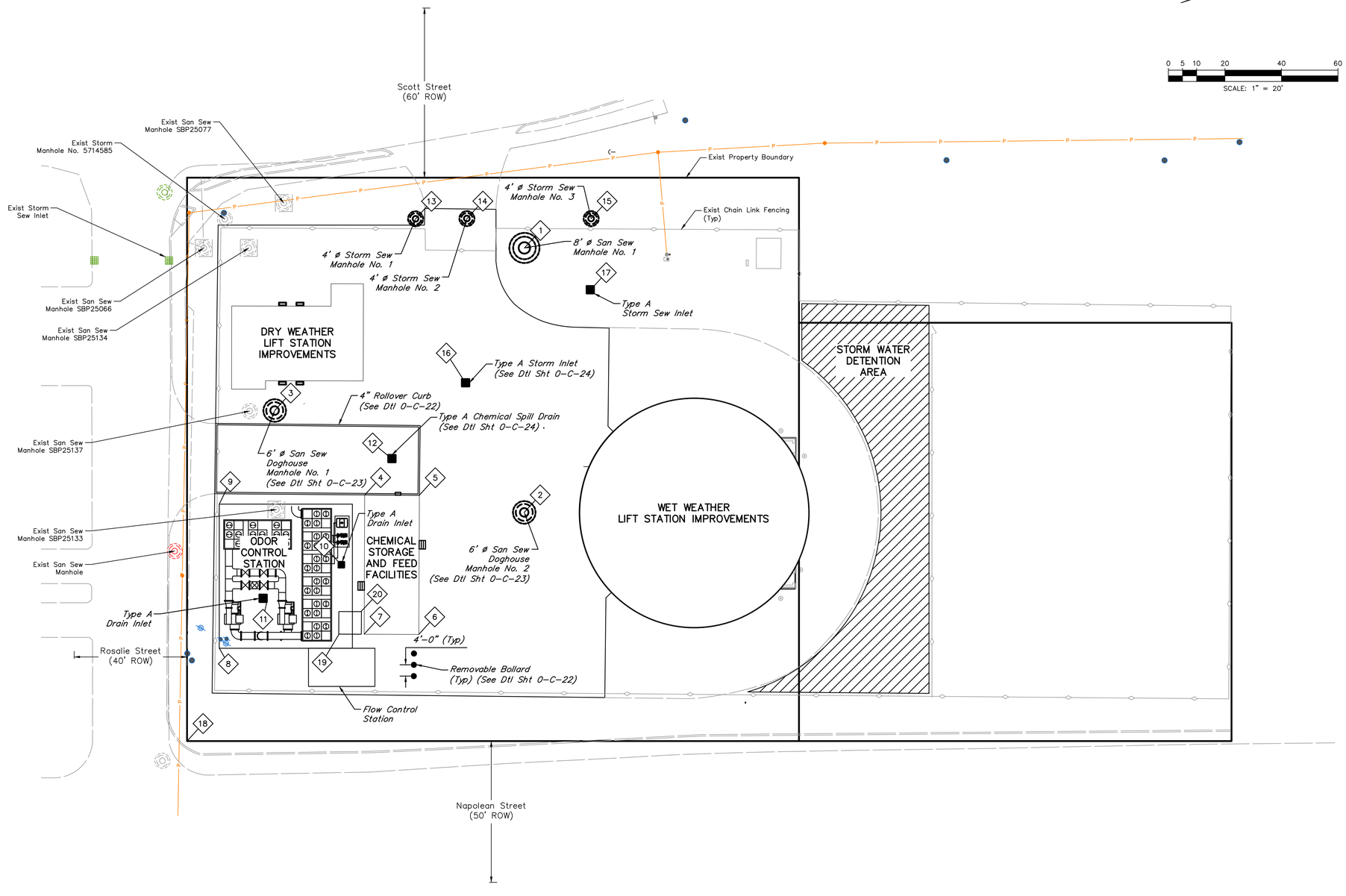
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: ~~XXX~~20' VERT: ~~XXX~~4'

CATEGORY NO. 0-C-6 SHEET NO. X OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



COORDINATES LOCATIONS TABLE

No.	NORTHING	EASTING
1	13830710.81	3126680.57
2	13830738.62	3126591.24
3	13830812.24	3126651.84
4	13830790.71	3126613.84
5	13830772.27	3126608.04
6	13830787.05	3126561.07
7	13830805.49	3126566.87
8	13830855.92	3126577.32
9	13830840.79	3126626.03
10	13830806.57	3126593.99
11	13830834.98	3126587.97
12	13830777.71	3126623.17
13	13830744.53	3126701.84
14	13830727.17	3126696.52
15	13830685.19	3126683.48
16	13830744.88	3126641.07
17	13830692.98	3126659.41
18	13830876.53	3126549.34
19	13830813.96	3126569.54
20	13830804.04	3126574.98

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: HARRY W. ISENSEE III, P.E.

P.E. Serial No.: 144401

Date: JUNE 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

PROPOSED SITE PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

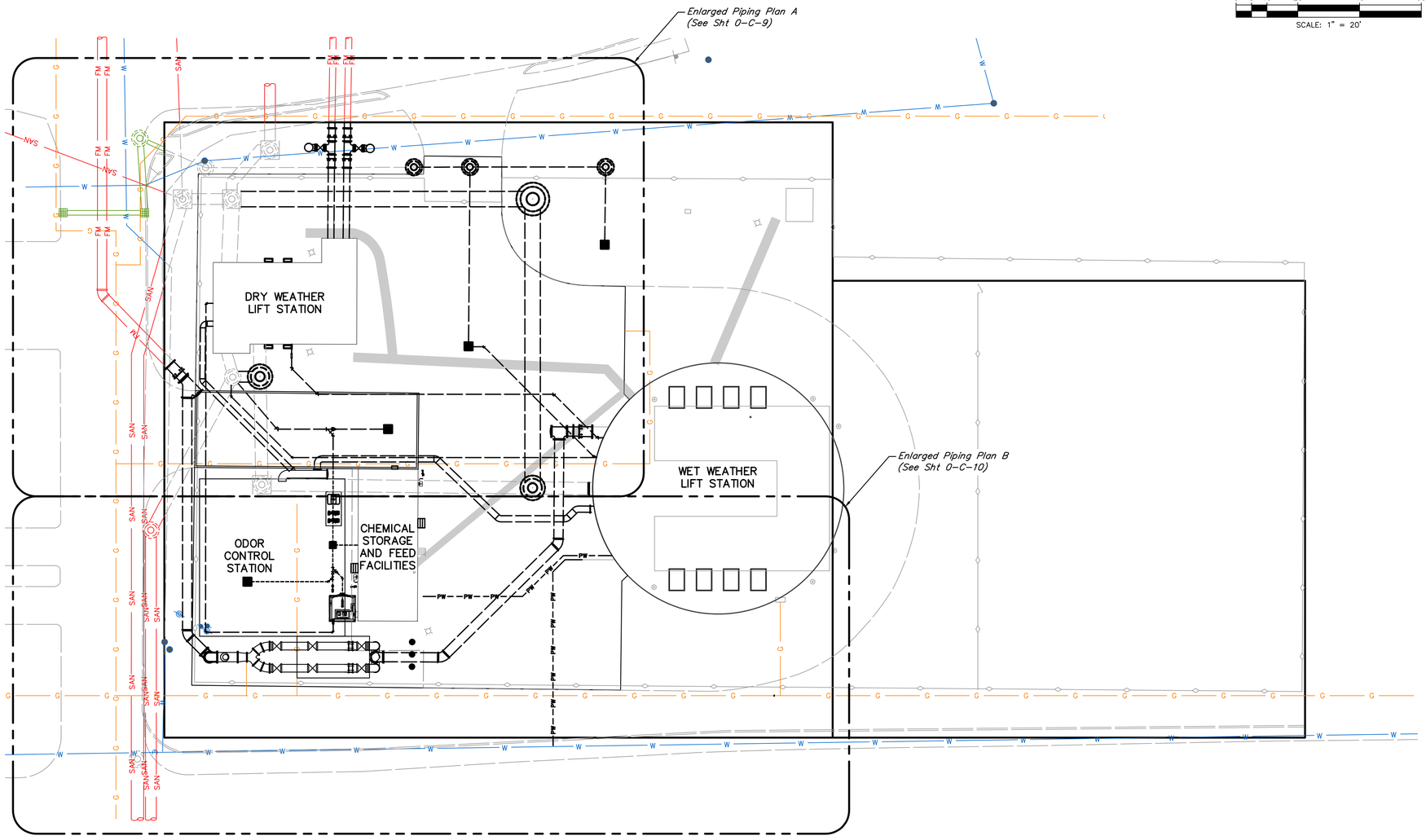
DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-7 SHEET NO. X OF XXX

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-PR.dwg, Jun 18, 2025 - 10:53am, ssomers

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 40 60
SCALE: 1" = 20'

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JUNE 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

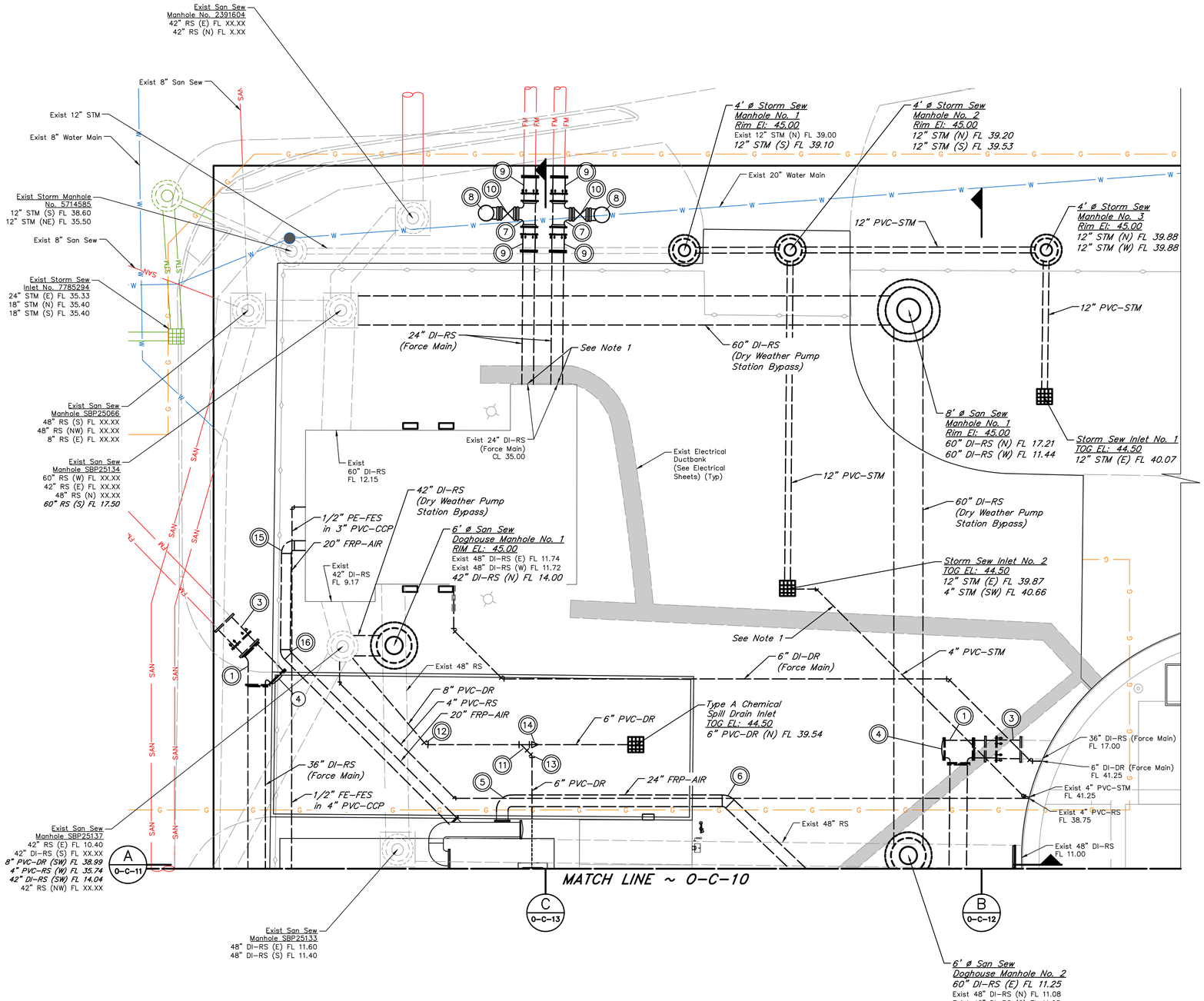
PROPOSED YARD PIPING PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-8 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-PR.dwg, Jun 18, 2025 - 10:55am, ssomers

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





0 5 10 20 30
SCALE: 1" = 10'

NOTES:

1. Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
2. Existing underground Centerpoint facilities are per map request data. Contractor shall field verify the line sizes, use, and location prior to removal. Contractor shall coordinate with Centerpoint prior to removal of Centerpoint underground facilities.

VALVES, FITTINGS, AND ACCESSORIES SCHEDULE

No.	DESCRIPTION
1	36"x36"x36" Tee Bend, FJ
2	36" 45° Bend, MJ
3	36" Flange Coupling Adapter
4	36" Blind Flange
5	24" 90° Bend, PE
6	24" 45° Bend, PE
7	24" Tee, FJ
8	24" 90° Bend, FJ
9	24" Flange Coupling Adapter
10	24" Gate Valve, MJ
11	8" x 8" x 6" Lateral Wye, PO
12	8" 45° Bend, PO
13	6" 45° Bend, PO
14	8" x 6" Concentric Reducer, PO
15	20" 90° Bend, PE
16	20" 45° Bend, PE

◎ Denotes the use of a restrained, push-on connection

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JUNE 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

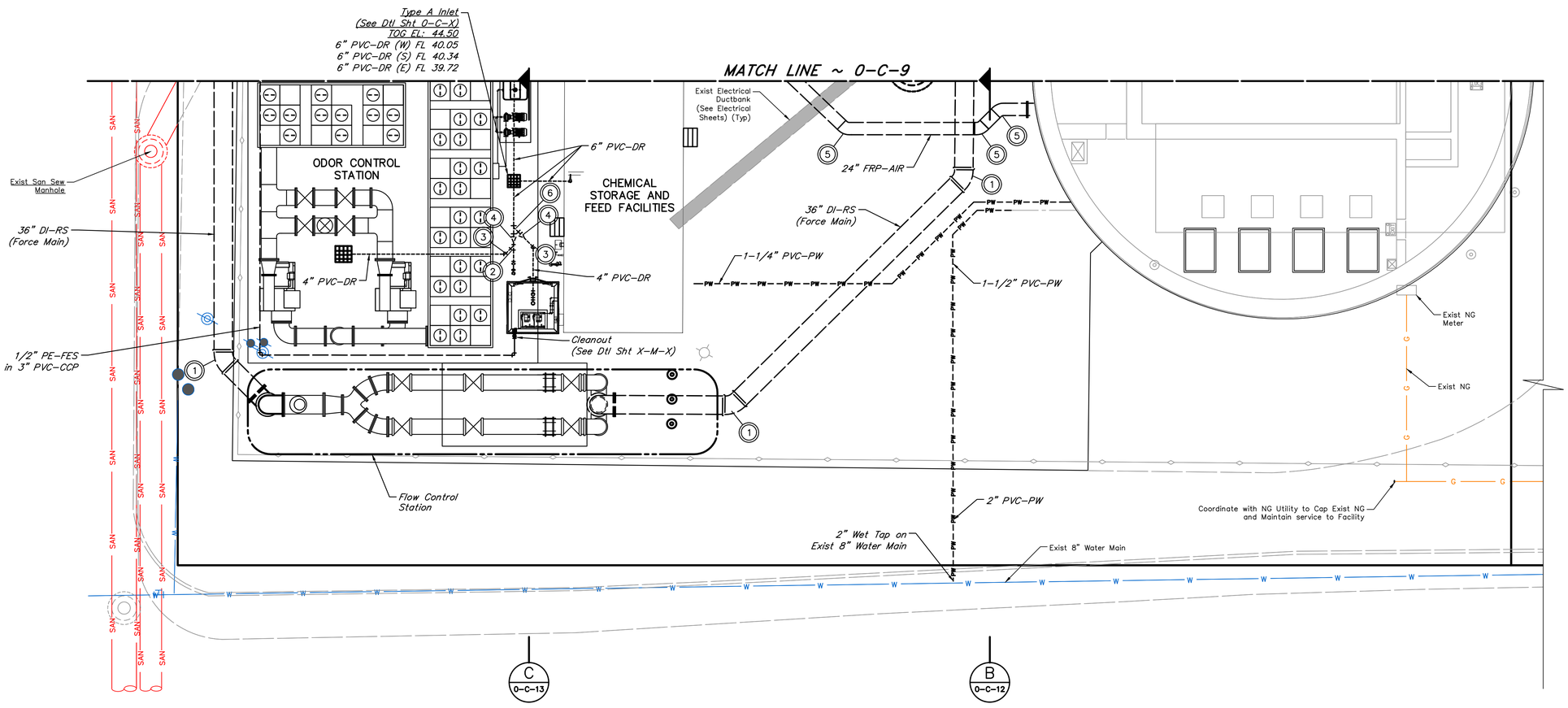
PROPOSED YARD PIPING ENLARGED PLAN A

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-9 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-PR.dwg, Jun 18, 2025 - 11:00am, ssomers

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 30
SCALE: 1" = 10'

VALVES, FITTINGS, AND ACCESSORIES SCHEDULE

No.	DESCRIPTION
1	36" 45° Bend, MJ
2	4" x 4" x 4" Lateral Wye, PO
3	4" 45° Bend, PO
4	6" x 4" Concentric Reducer, PO
5	24" 45° Bend, PE
6	6" x 6" x 6" Lateral Wye, PO

◎ Denotes the use of a restrained, push-on connection

NOTES:

1. Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
2. Existing underground Centerpoint facilities are per map request data. Contractor shall field verify the line sizes, use, and location prior to removal. Contractor shall coordinate with Centerpoint prior to removal of Centerpoint underground facilities.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JUNE 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

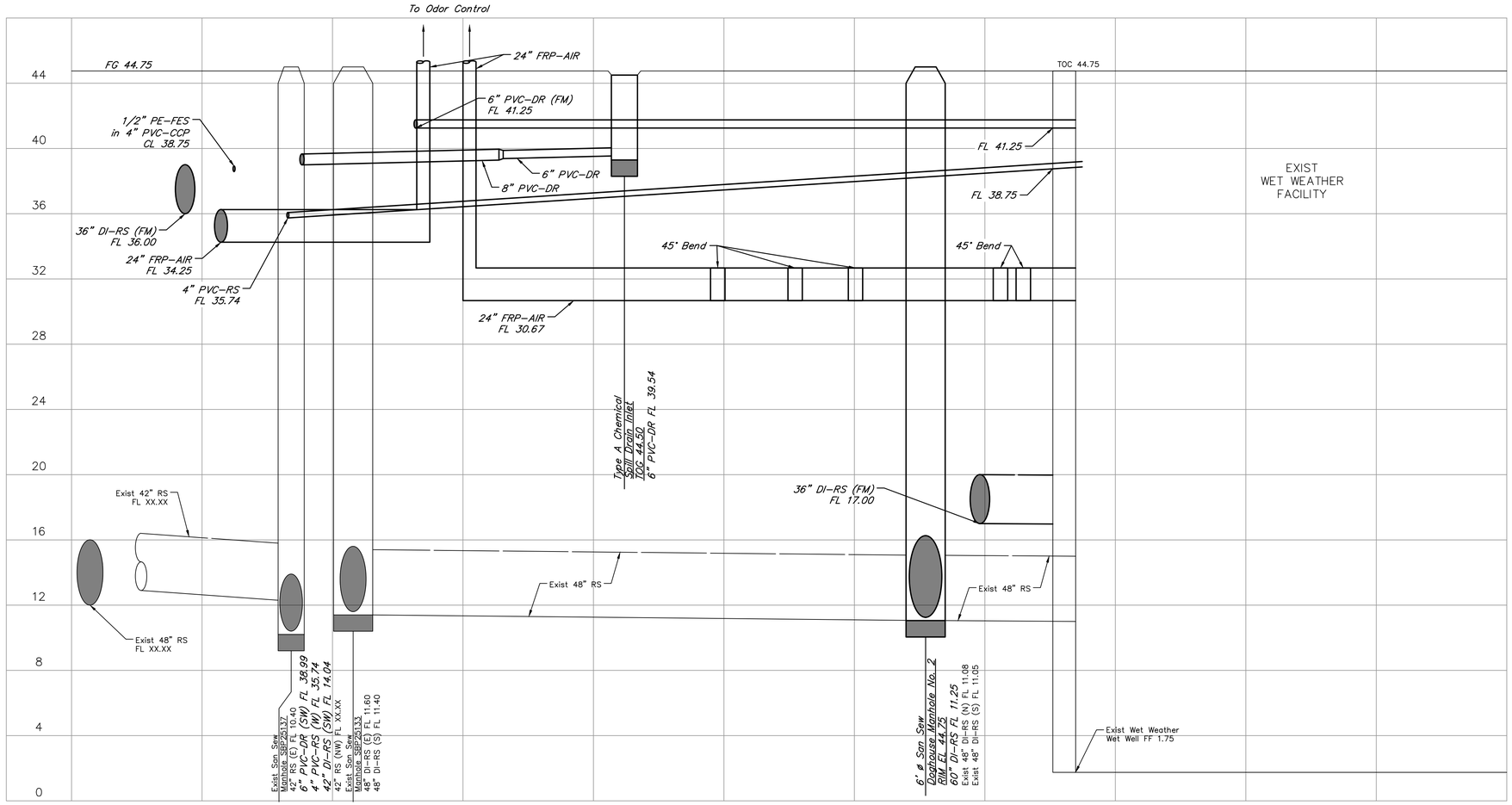
SCOTT STREET No. 1
LIFT STATION REHABILITATION

PROPOSED YARD PIPING ENLARGED PLAN B

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX
CATEGORY NO. O-C-10 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



A
0–C–9

SECTION

SCALE: Horizontal 1" = 10'
SCALE: Vertical 1" = 4'

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: HARRY W. ISENSEE III, P.E.

P.E. Serial No.: 144401

Date: JUNE 2025

QUIDDITY

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050–0099–01 | DWG BY: SSOMERS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

PROPOSED YARD PIPING SECTION A

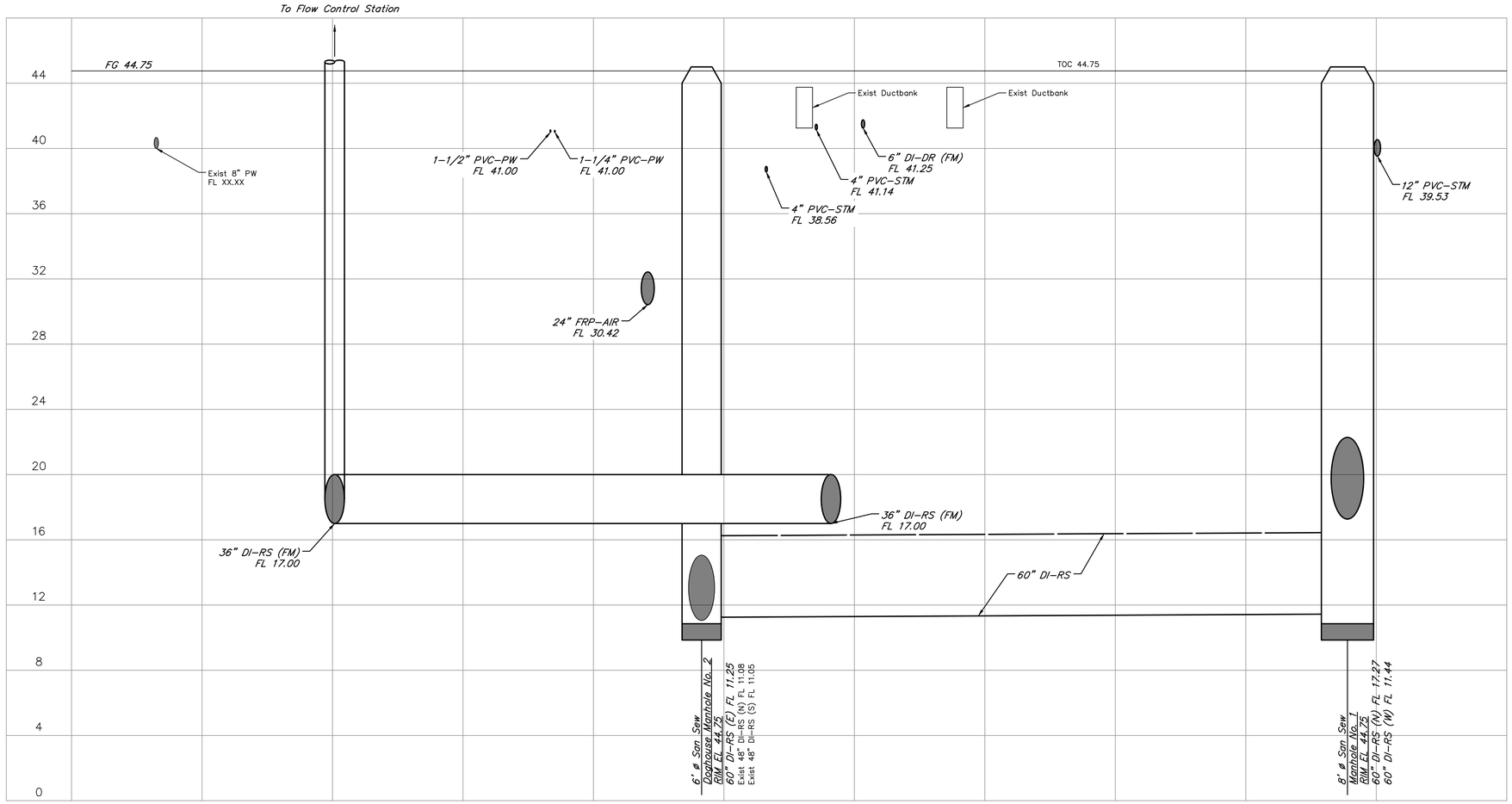
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: 1"=10' VERT: 1"=4'

CATEGORY NO. 0–C–11 SHEET NO. X OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



B
0-C-9
SECTION
SCALE: Horizontal 1" = 10'
SCALE: Vertical 1" = 4'

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JUNE 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: SSOMERS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

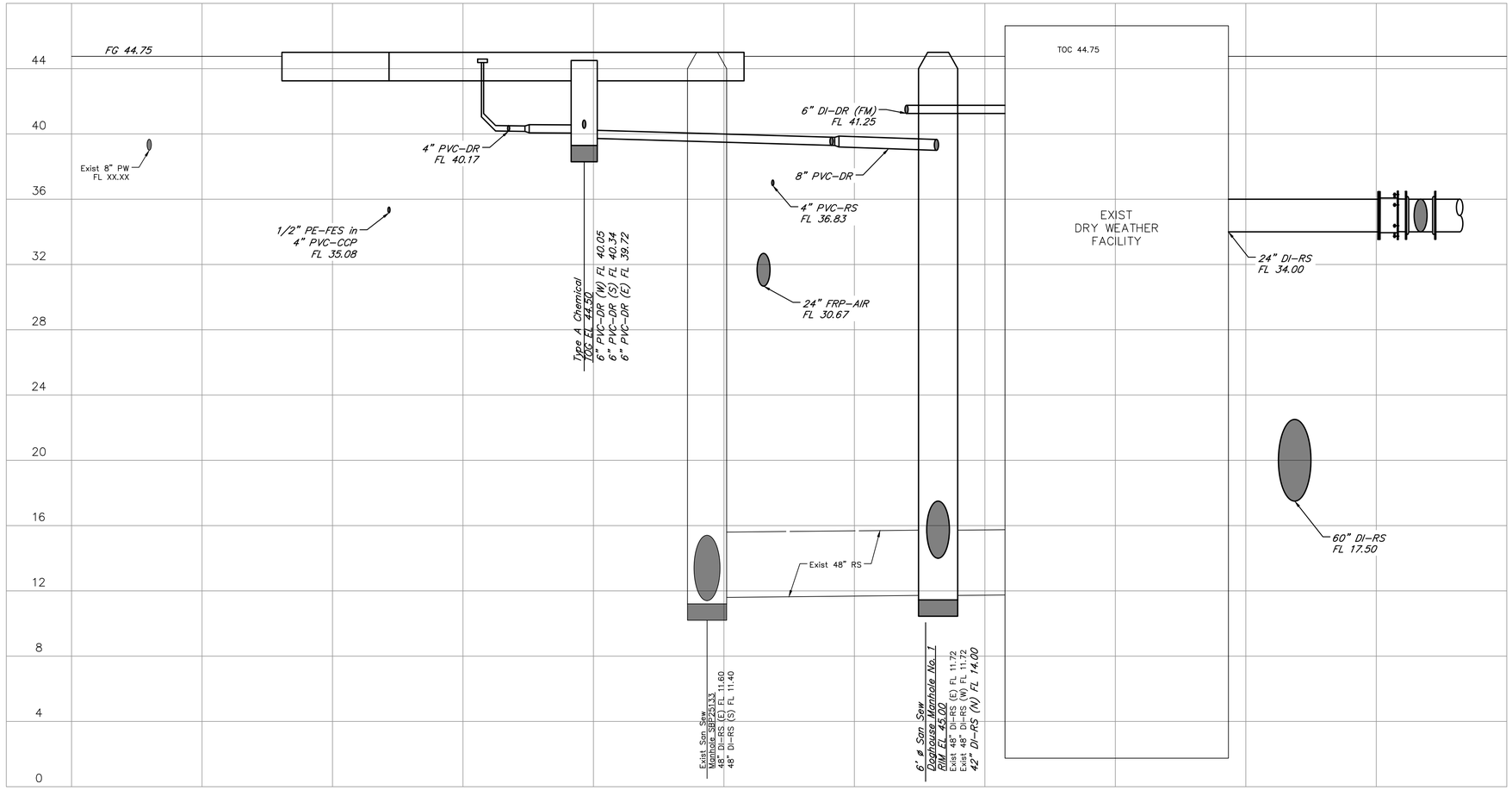
SCOTT STREET No. 1
LIFT STATION REHABILITATION

PROPOSED YARD PIPING SECTION B

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-12 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



C
O-C-9

SECTION

SCALE: Horizontal 1" = 10'
SCALE: Vertical 1" = 4'

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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Engineer: HARRY W. ISENSEE III, P.E.
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CITY OF HOUSTON
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DATE: MARCH 2025 | DGN BY: JBSANCHEZ
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NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

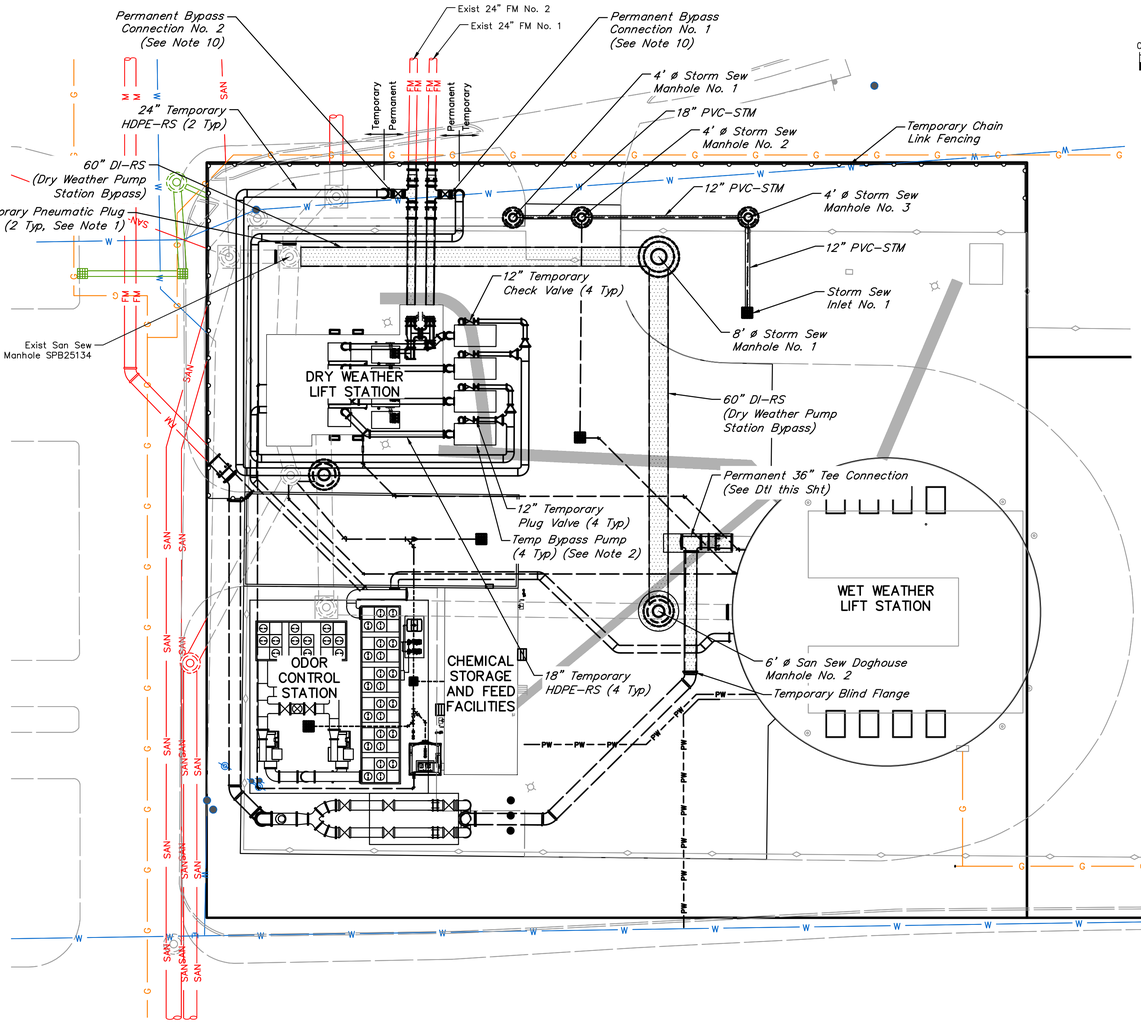
SCOTT STREET No. 1
LIFT STATION REHABILITATION

PROPOSED YARD PIPING
SECTION C

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX
CATEGORY NO. O-C-13 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 40 60
SCALE: 1" = 20'

LEGEND:

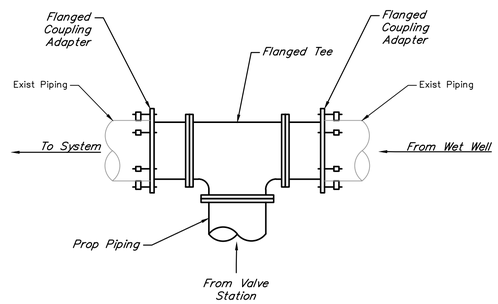
- To Be Constructed
- Constructed

PHASE 1:

OJECTIVE:	Install Permanent Bypass Connection Nos. 1 & 2 and set up and operate phase 1 bypass pump system to install 60" DI-RS, San Sew MH No. 1 and San Sew Doghouse MH No. 1.
1	Contractor shall coordinate with Operator to isolate exist 24" FM No. 1 and temporarily route all dry weather pump station flow through exist 24" FM No. 2 to install Permanent Bypass Connection No. 1.
2	Contractor shall coordinate with Operator to isolate exist 24" FM No. 2 and temporarily route all dry weather pump station flow through exist 24" FM No. 1 to install Permanent Bypass Connection No. 2.
3	Contractor shall set up and put bypass pump system into service. Influent raw sewage shall flow into the exist Dry Weather Lift Station wet well. Contractor shall coordinate with Operator to remove existing Dry Weather Lift Station pumps and controls from service. Bypass pump system shall suction lift from wet well and pump flow into and through the existing force mains via Permanent Bypass Connection Nos. 1 & 2.
4	Perform all work necessary to install proposed 60" DI-RS, 8' ø San Sew MH No. 1 and 6' ø San Sew Doghouse MH No. 1.
5	Contractor shall construct proposed Permanent 36" Tee Connection and install temporary blind flange a minimum 10' west of San Sew Doghouse MH No. 2.
6	Construct Storm Sewer Nos. 1, 2, and 2, and Storm Sewer Inlet No. 1 and associated connectind underground pipes. Contractor shall make temporary connection from Exist 18" Storm Sewer to Storm Sewer MH No. 1. Contractor shall not make proposed 18" Storm Sew connection to Storm Sew No. 2 until exist storm sew inlet can be removed from service and proposed Storm Sew Inlet No. 2 can be constructed and put into service. Contractor shall maintain storm sewer service and positive drainage for throughout all construction.

BYPASS NOTES:

1. Contractor may install temporary pneumatic plugs as necessary to make proposed 60" DI-RS connection to Exist San Sew MH. Contractor shall take all measures to limit duration of temporary plug operation. Contractor shall monitor water surface upstream of temporary plugs. Contractor shall provide and install additional bypass pumps as required to pump from Exist San Sew MH SPB25134 to Dry Weather Wet Well as required and as directed by the Engineer. Include cost in base bid.
2. Water surface upstream of temporary plugs shall not exceed # water depth.
3. Water Depth during the Phase 1 Bypass shall not exceed # in the Dry Weather Lift Station wet well at any time during the bypass operation.
4. Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means of power, and removal for the duration of the required bypass. The duty condition for the Phase 1 Bypass System A is 10,185 gpm at ## TDH (2 pumps pumping through 1 Force Main). The duty condition for the Phase 1 Bypass System B is ### gpm at ## TDH (1 pump pumping through 1 Force Main). Contractor shall provide 3 duty pump (min.) and 1 spare.
5. Contractor shall secure all bypass pumping equipment at all times.
6. Contractor shall be responsible for leaks an cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
7. Contractor shall provide and install all the plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system.
8. All temporary piping shall be PVC or fusion welded HDPE.
9. Bypass shall remain in place until demonstration period has been completed.
10. Contractor shall coordinate with the Operator and Engineer prior to shutting down the lift station for bypass pumping.
11. Contractor shall install blind flange on the first above ground flange on permanent bypass connection Nos. 1 & 2 after all bypass work is complete.



PERMANENT 36" TEE DETAIL
SCALE - 1/4"=1'

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JUNE 2025

QUIDDITY
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6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

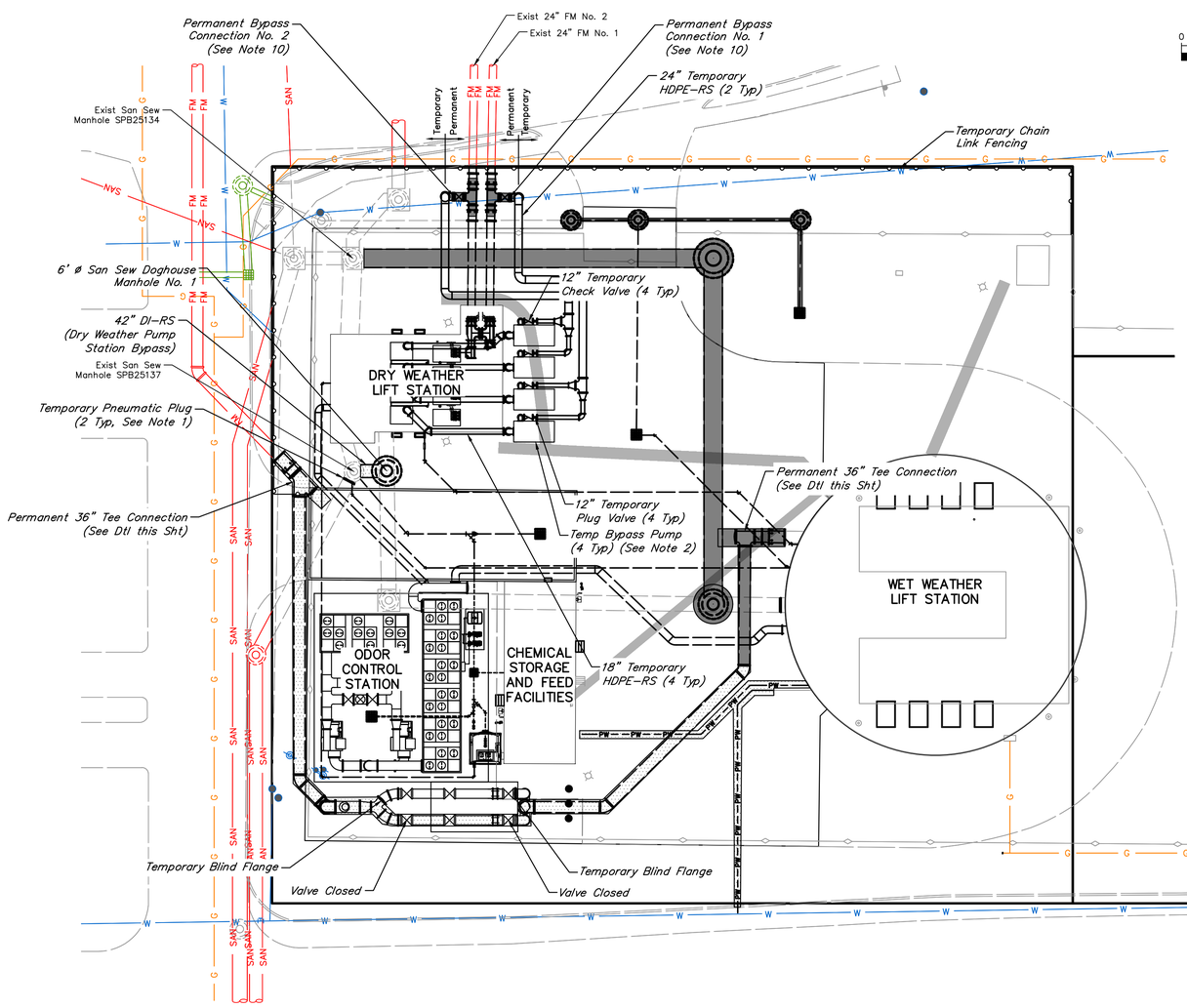
CONSTRUCTION SEQUENCING & BYPASS PHASE 1

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-14 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-PR.dwg, Jun 18, 2025 - 11:10am, ssomers

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 40 60

SCALE: 1" = 20'

LEGEND:

- To Be Constructed
- Constructed

PHASE 2:

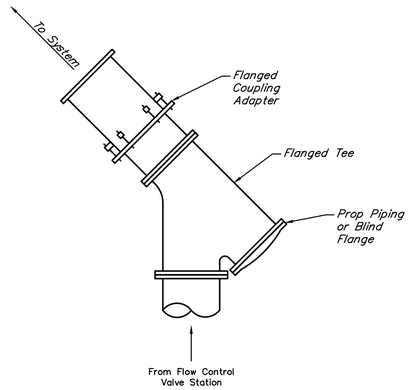
OJECTIVE:	Set up and operate Phase 2 Bypass Pump System. Construct proposed San Dew Doghouse Manhole No. 2 and 42" DI-RS. Construct Permanent 36" Tee Connection and 36" Permanenct Wye Connection.
1	Contractor shall set up and operate Phase 2 Bypass Pump System. Influent raw sewage shallf low into the exist Dry Weather Lift Station wet well. Contractor shall coordinate with Operator to remove existing Dry Weather Left Station pumps and controls from service. Bypass pump system shall suction lift from wet well and pump flow into and through the existing force mains via Permanent Bypass Connection Nos. 1 & 2.
2	Construct proposed potable water and permanent connection to and from the Wet Weather Facility. Install temporary connection to exist chemical feed facility.
3	Contractor shall construct flow control valve station header 1 and permanent piping to be utilized during Phase 4 of Construction.
4	Contractor shall construct proposed Permanent 36" Wye Connection and remaining sections of proposed 36" DI-RS underground piping. Flow control valve station header 1 must be constructed and isolation valves must be operational.

NOTES:

1. Contractor may install temporary pneumatic plugs as necessary to make proposed 42" DI-RS connection to Exist San Sew MH. Contractor shall take all measures to limit duration of temporary plug operation. Contractor shall monitor water surface upstream of temporary plugs. Water surface upstream of temporary plugs shall not exceed # water depth. Contractor shall coordinate with Operator to temporarily suspend flow from Wet Weather restroom facilities to sanitary.

BYPASS NOTES:

1. Contractor may install temporary pneumatic plugs as necessary to make proposed 42" DI-RS connection to Exist San Sew MH. Contractor shall take all measures to limit duration of temporary plug operation. Contractor shall monitor water surface upstream of temporary plugs. Contractor shall provide and install additional bypass pumps as required to pump from Exist San Sew MH SPB25137 to Dry Weather Wet Well as required and as directed by the Engineer. Include cost in base bid.
2. Water surface upstream of temporary plugs shall not exceed # water depth.
3. Water Depth during the Phase 2 Bypass shall not exceed # in the Dry Weather Lift Station wet well at any time during the bypass operation.
4. Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means of power, and removal for the duration of the required bypass. The duty condition for the Phase 1 Bypass System A is 10,185 gpm at ## TDH (2 pumps pumping through 1 Force Main). The duty condition for the Phase 1 Bypass System B is ## gpm at ## TDH (1 pump pumping through 1 Force Main). Contractor shall provide 3 duty pump (min.) and 1 spare.
5. Contractor shall secure all bypass pumping equipment at all times.
6. Contractor shall be responsible for leaks an cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
7. Contractor shall provide and install all the plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system.
8. All temporary piping shall be PVC or fusion welded HDPE.
9. Bypass shall remain in place until demonstration period has been completed.
10. Contractor shall coordinate with the Operator and Engineer prior to shutting down the lift station for bypass pumping.
11. Contractor shall install blind flange on the first above ground flange on permanent bypass connection Nos. 1 & 2 after all bypass work is complete.



PERMANENT 36" TEE DETAIL

SCALE - 1/4"=1'

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: HARRY W. ISENSEE III, P.E.

P.E. Serial No.: 144401

Date: JUNE 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

CONSTRUCTION SEQUENCING & BYPASS PHASE 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

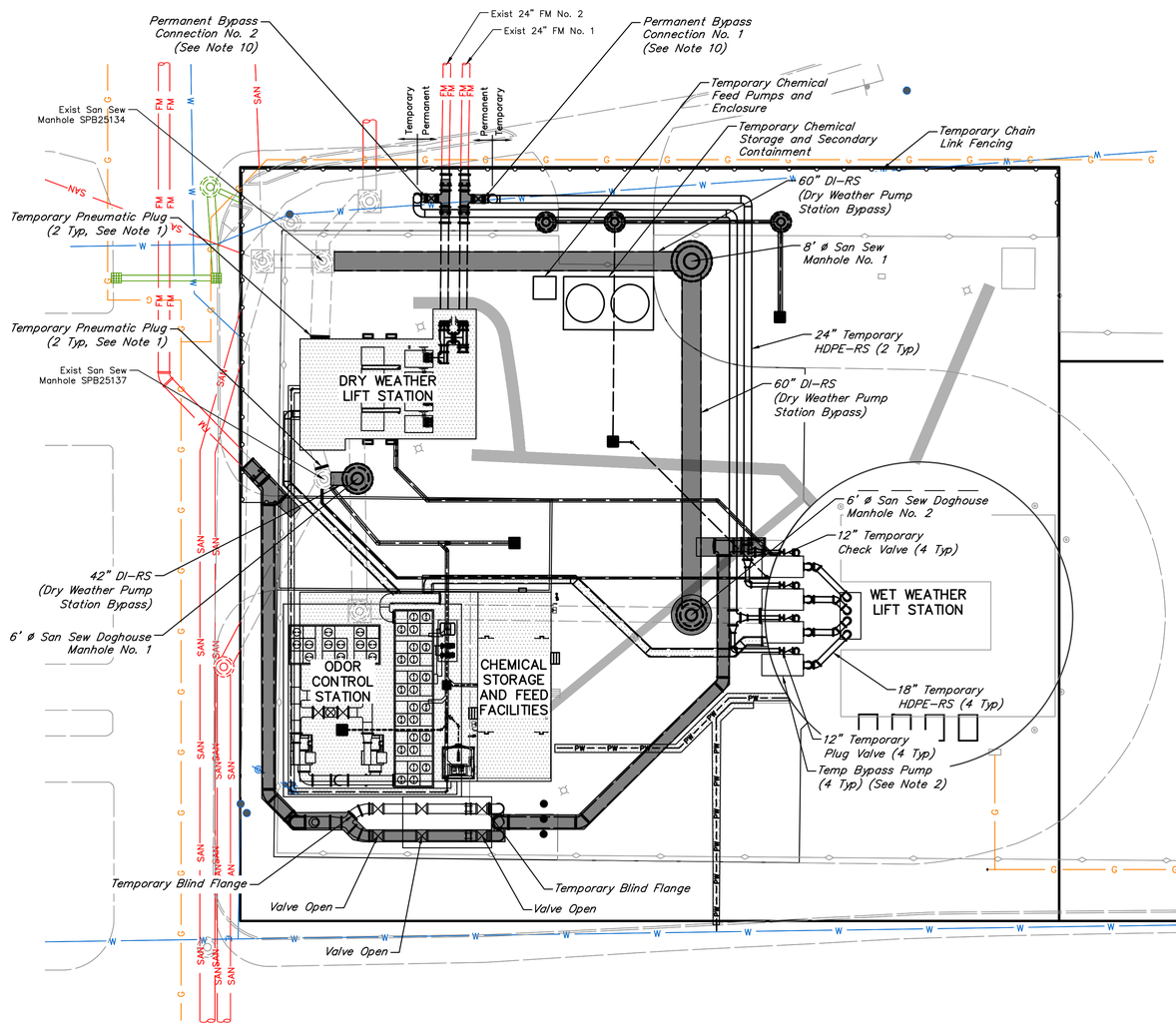
DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-15 SHEET NO. X OF XXX

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-PR.dwg, Jun 18, 2025 - 11:10am, ssomers

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 5 10 20 40 60

SCALE: 1" = 20'

LEGEND:

To Be Constructed

Constructed

PHASE 3:

OJECTIVE:	Set up and operate Phase 3 Bypass Pump System. Set up and operate Temporary Chemical Storage and Chemical Feed System. Construct Dry Weather Lift Station Improvements. Construct proposed Chemical Storage and Feed Facility Replacement. Construct Odor Control Station.
1	Contractor shall set up and operate Phase 3 Bypass Pump System. Contractor shall install and maintain temporary plugs to isolate the Dry Weather Lift Station from influent raw sewage. Influent raw sewage shall be diverted to the Wet Weather Wet Well via the bypass lines installed in Phases 1 & 2. Contractor shall coordinate with Operator to adjust Wet Weather Pump settings. Contractor shall coordinate with Operator to lock out Wet Weather Drain Pump Nos. 1 & 2 from service for the duration of Dry Weather Lift Station is out of service. Bypass pump system shall suction lift from Wet Weather Wet Well and pump flow into and through the existing force mains via Permanent Bypass Connection Nos. 1 & 2.
2	Contractor shall provide, install, operate, and maintain temporary chemical storage tanks and temporary chemical feed equipment. Minimum required temporary chemical storage capacity shall be #,### gallons. Chemical storage tanks shall have secondary containment instrumentation to detect leak. Temporary chemical metering pumps and controls shall be provided as described in Specification Section 01### (1 duty, 1 spare). Contractor shall provide temporary power for duration of temporary chemical system operation and until proposed chemical facilities demonstration period has concluded and the facilities are approved for service. Contractor shall make temporary chemical storage tanks accessible to the Operator for chemical delivery at all times. Chemical shall be supplied by the Owner. Contractor shall monitor the chemical level and coordinate with the Operator for chemical deliveries.
3	Transfer Wet Weather Lift Station service to proposed 36" DI-RS Force Main route through Flow Control Station, header 1. Flow control valve shall remain in manual fully open position.
4	Contruct Chemical Storage and Feed Facility Replacement.
5	Construct Odor Control Station
6	Contsruct 20" FRP-AIR from Dry Weather Lift Station to Odor Control Station; 24" FRP-AIR from within 10' of Wet Weather structure to Odor Control Station; 6" DI-DR (FM) from Wet Weather Lift Station to Dry Weather Lift Station; 4" DI-DR from Wet Weather Lift Station to Exist San Sew MH No. SBP25137; drain piping and inlets from Chemical Containment/Odor Control/Chemical Spill to Exist San Sew MH No. SBP25137.

NOTES:

1. Contractor may install temporary pneumatic plugs as necessary to make proposed 42" DI-RS connection to Exist San Sew MH. Contractor shall take all measures to limit duration of temporary plug operation. Contractor shall monitor water surface upstream of temporary plugs. Water surface upstream of temporary plugs shall not exceed # water depth. Contractor shall coordinate with Operator to temporarily suspend sanitary flow from Wet Weather restroom facilities.

BYPASS NOTES:

1. Water Depth during the Phase 3 Bypass shall not exceed # in the Wet Weather Lift Station wet well at any time during the bypass operation during dry weather flow. Contractor shall coordinate with Operator to adjust Wet Weather pump calls above dry weather bypass pump system pump calls.
2. Water Depth during the Phase 3 Bypass shall not exceed # in the Exist San Sew MH SPB25134 at any time during the bypass operation.
3. Water Depth during the Phase 3 Bypass shall not exceed # in the Exist San Sew MH SBP25137 at any time during the bypass operation.
4. Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means of power, and removal for the duration of the required bypass. The duty condition for the Phase 1 Bypass System A is 10,185 gpm at ## TDH (2 pumps pumping through 1 Force Main). The duty condition for the Phase 1 Bypass System B is ### gpm at ## TDH (1 pump pumping through 1 Force Main). Contractor shall provide 3 duty pump (min.) and 1 spare.
5. Contractor shall secure all bypass pumping equipment at all times.
6. Contractor shall be responsible for leaks an cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
7. Contractor shall provide and install all the plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system.
8. All temporary piping shall be PVC or fusion welded HDPE.
9. Bypass shall remain in place until demonstration period has been completed.
10. Contractor shall coordinate with the Operator and Engineer prior to shutting down the lift station for bypass pumping.
11. Contractor shall install blind flange on the first above ground flange on permanent bypass connection Nos. 1 & 2 after all bypass work is complete.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: HARRY W. ISENSEE III, P.E.

P.E. Serial No.: 144401

Date: JUNE 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

CONSTRUCTION SEQUENCING & BYPASS PHASE 3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

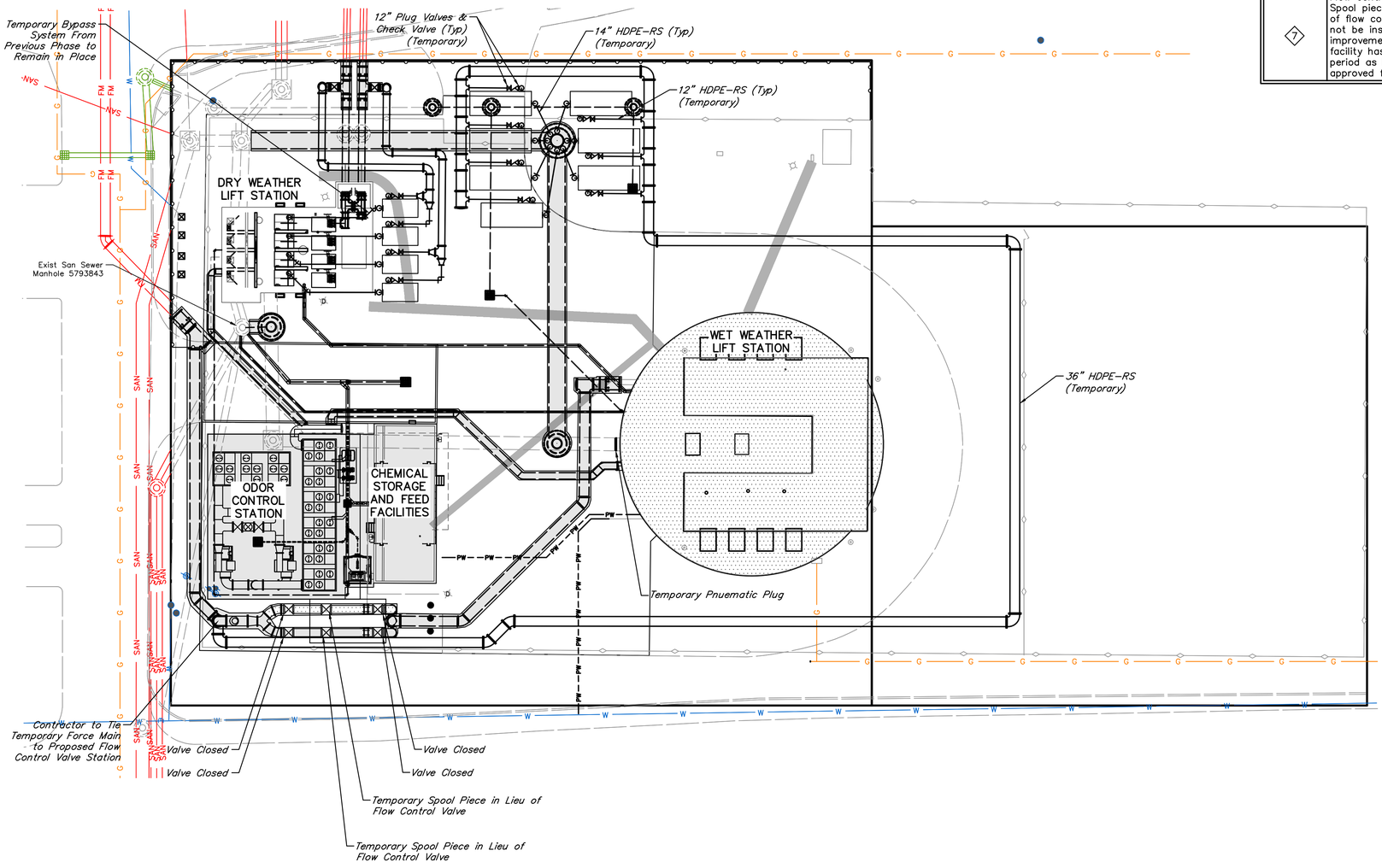
DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX

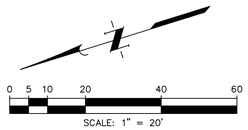
CATEGORY NO. 0-C-16 SHEET NO. X OF XXX

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





LEGEND:

- To Be Constructed
- Constructed

PHASE 4	
OBJECTIVE	Contractor shall Set-up Bypass and Perform Construction at the Odor Control System, and Wet Weather Facility.
1	Contractor shall Set-up Bypass System for Wet Weather Facility, See Notes this Sheet.
2	Prior to Placing Bypass System Online Contractor shall install Blind Flanges on Tees.
3	Contractor to Perform Rehabilitation work at the Wet Weather Facility. Contractor shall provide Temporary power to Dry Weather Pump Station while work at the Wet Weather Station is being Completion. See Sheets (X-M-X through X-M-X)
4	Contractor shall provide temporary power and equipment to wet weather facility as necessary to complete the work. (i.e. lighting, ventilation, tools, etc)
5	Contractor shall provide temporary power to the chemical storage and feed facility.
6	Odor Control System shall not be put into operation until all wet weather facility improvements are complete and the wet weather facility has been started up and demonstration period as been completed and the system approved for service.
7	Flow control station header 2 shall be constructed. Spool pieces shall be temporarily installed in place of flow control valves and flow control valves shall not be installed until all wet weather facility improvements are complete and the wet weather facility has been started up and demonstration period as been completed and the system approved for service.

NOTES:

1. Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means of power, and removal for the duration of the required bypass. The duty condition for the bypass system is 4,960 gpm at 85' TDH. contractor shall provide 7 duty pump (min.) and 1 spare.
2. Contractor shall coordinate with the operator and install floats inside the bypass manhole at elevations necessary to maintain an operational system. During bypass the contractor shall cover the manhole with a wooden lid. Water depth in bypass manhole shall not exceed 8' at any time while the lift station is out of service.
3. Contractor shall secure all bypass pumping equipment at all times.
4. Contractor shall be responsible for leaks and cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
5. contractor shall provide and install all plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system. A minimum of one pump and one spare shall be.
6. All temporary piping shall be PVC or fusion welded HDPE.
7. Bypass shall remain in place until the demonstration period has been completed.
8. Contractor shall coordinate with the Operator and Engineer prior to shutting down the lift station for bypass pumping.
9. Contractor shall field verify the piping diameter at bypass manhole prior to providing and installing the temporary plugs.
10. Contractor is responsible for removing the manhole ring (if necessary) to allow proper installation and operation of the bypass plan. Contractor shall re-install removed manhole ring and repaid the manhole, complete with grouting, upon completion of bypass operation.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JUNE 2025

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DATE: MARCH 2025 | DGN BY: JBSANCHEZ
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NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

CONSTRUCTION SEQUENCING & BYPASS PHASE 4

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1"=20' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-17 SHEET NO. X OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\CIVIL-PR.dwg, Jun 18, 2025 - 11:13am, ssomers

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

LEGEND:

EXISTING	PROPOSED	
		EDGE OF PAVEMENT
		DRAINAGE SWALE
		TOP OF BANK
		PROPERTY LINE
		PIPELINE
		EASEMENT
		FENCE
		PROPOSED CONCRETE MAINTENANCE
		PROPOSED REINFORCED CONCRETE
		4" ROLLOVER CURB



0 5 10 20 40 60

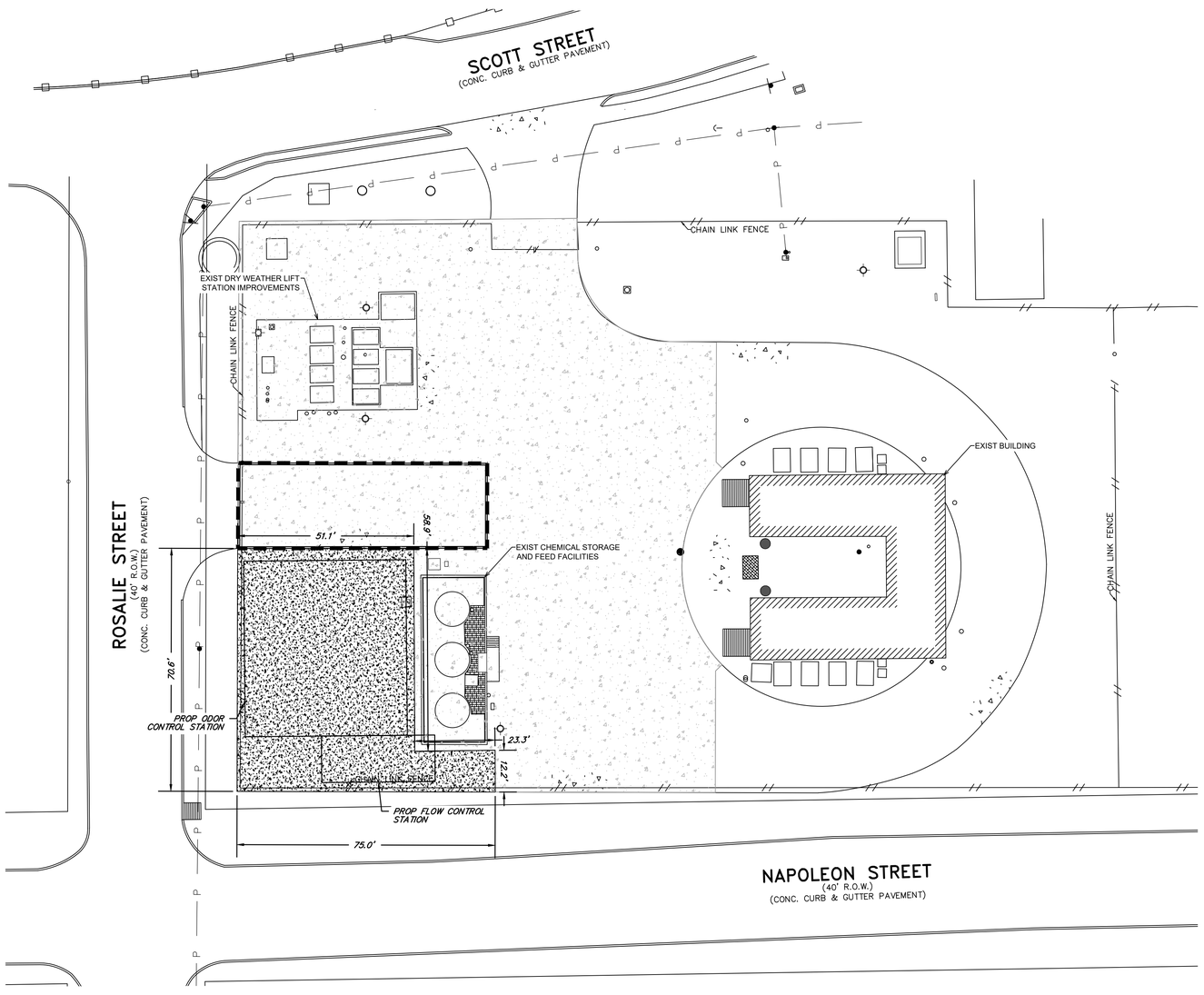
SCALE: 1" = 20'

BENCH MARK
A BRASS DISC STAMPED "RM 070215" LOCATED AT THE END OF YAUPON HOLLY LANE AT ITS INTERSECTION WITH EASTERN REDBUD LANE, ON TOP OF A "B-B" INLET AT THE NORTHWEST CORNER OF THE INTERSECTION.
ELEVATION = 64.76 FEET NAVD 88 (2001 ADJUSTMENT)

T.B.M. "A"
A CHISELED SQUARE ON THE BULL NOSE OF THE ESPLANADE LOCATED ON WEST LAKE HOUSTON PARKWAY APPROXIMATELY 970 FEET NORTH OF THE CENTERLINE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.
ELEVATION = 55.34 FEET NAVD 88 (2001 ADJUSTMENT)

T.B.M. "B"
A CHISELED SQUARE ON TOP OF A "B-B" INLET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.
ELEVATION = 53.67 FEET NAVD 88 (2001 ADJUSTMENT)

100-YEAR FLOOD PLAIN
ACCORDING TO MAP No. 48201C0510L OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR HARRIS COUNTY, TEXAS AND INCORPORATED AREAS, DATED JUNE 18, 2007, THE SUBJECT TRACT IS SITUATED WITHIN UNSHADED ZONE "X"; DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN (500-YEAR FLOOD).



NOTES:

1. THERE ARE ACTIVE GAS LINES ON SITE. CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 A MINIMUM OF 48 HOURS PRIOR TO MOBILIZATION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.
2. CONTRACTOR TO REFER TO GEOTECHNICAL ENGINEERING REPORT NO. 24.14.022 PREPARED BY TOLUNAY WONG ENGINEERS FOR RECOMMENDATIONS.
3. TEJAS-SOUTHWESTERN PIPELINE CO. & GULF PIPELINE COMPANY (MONUMENT PIPELINE) HAVE REVIEWED THE PROPOSED PIPELINE CROSSINGS AND HAVE PROVIDED A LETTER OF NO OBJECTION DATED 09/03/24.
4. CRUSHED CONCRETE MUST BE RATED TO SUPPORT 75,000 lbs.
5. PROJECT WILL NOT ADVERSELY AFFECT ADJOINING PROPERTIES
6. ACCESS TO SITE IS PROVIDED VIA AN EXISTING ACCESS ROAD. THE ACCESS ROAD'S ENTRANCE TO THE DEVELOPMENT IS LOCATED OFF STOCKDICK ROAD. DESIGN AND CONSTRUCTION CONFIGURATIONS CAN BE LOCATED IN THE PLAN SET "SUNTERRA LAKES PHASE I DETENTION AND MASS GRADING" DATED MAY 2024.
7. PAVEMENT ELEVATIONS CAN BE FOUND ON SHEET C7 OF THIS PLAN SET.

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date:
CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.
Signature Valid for six months.

Date:
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
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Date:
Approved for AT&T Texas / SWBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: _____
P.E. Serial No.: _____
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: JK
JOB NO: 00050-0099-01 DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

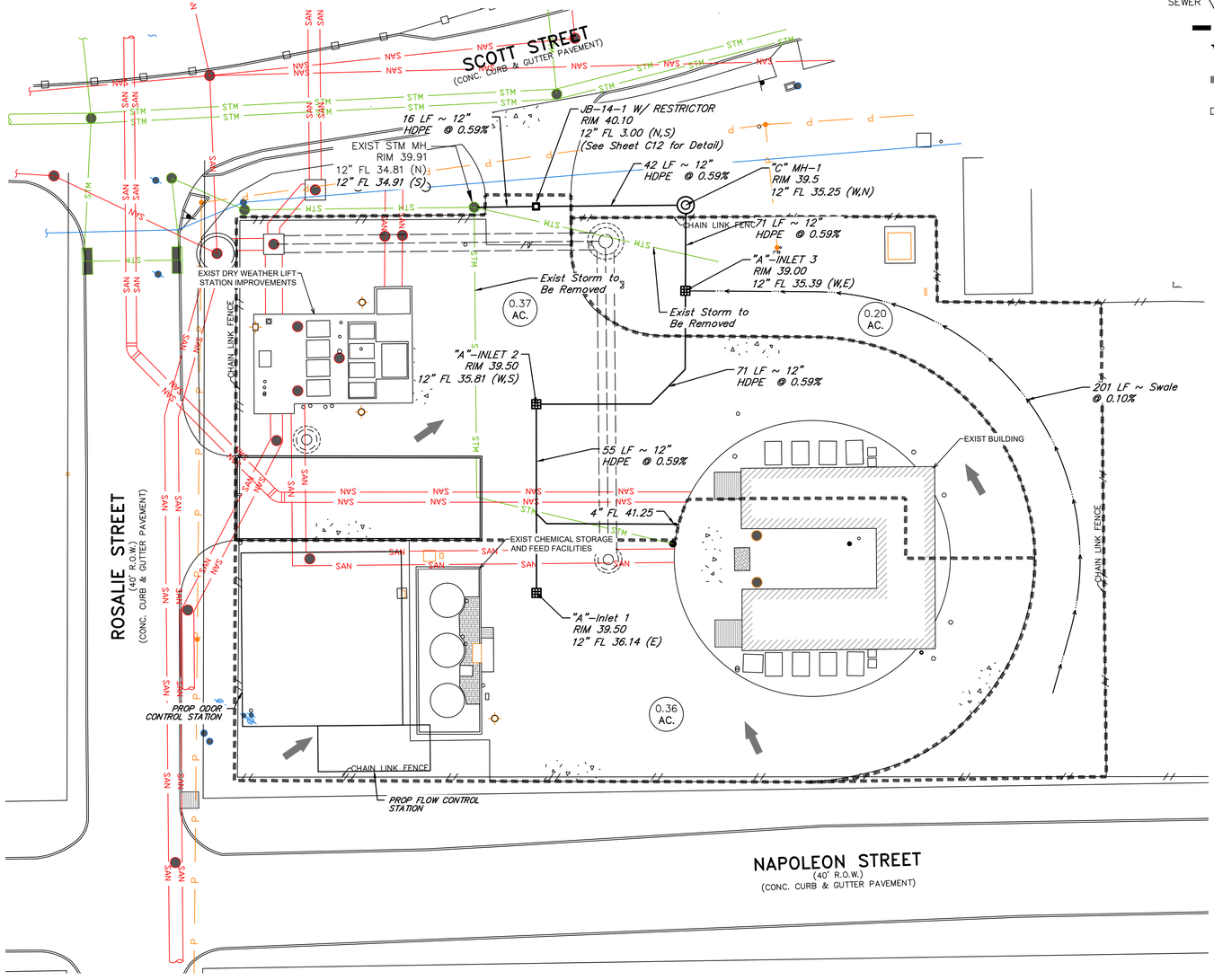
SITE PAVING & DIMENSION PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: 1"=20' VERT:
CATEGORY NO. 0-C-18 SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY JMF

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\SITE\Plans\00050-0099-01 CIVIL SHEETS.dwg Jul 11,2025 - 2:32pm kjk

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



LEGEND:

EXISTING	PROPOSED	
		EDGE OF PAVEMENT
		DRAINAGE SWALE
		TOP OF BANK
		PROPERTY LINE
		PIPELINE
		EASEMENT
		FENCE
		GRAVEL ROAD REFER TO SHEET C10
		RIP-RAP REFER TO SHEET C10

INLET 1.82 AC. — DRAINAGE AREA IN ACRES

STORM SEWER 8.83 / 12.99 — CUMULATIVE (100 YR) RUNOFF IN C.F.S.

DRAINAGE AREA BOUNDARY

VII — DRAINAGE AREA NUMBER

EXTREME EVENT ONSITE SHEET FLOW

EXTREME EVENT OFFSITE SHEET FLOW

0 5 10 20 40 60
SCALE: 1" = 20'

BENCH MARK
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NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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P.E. Serial No.: _____
Date: JULY 2025

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Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: JK
JOB NO: 00050-0099-01 DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

SITE DRAINAGE PLAN

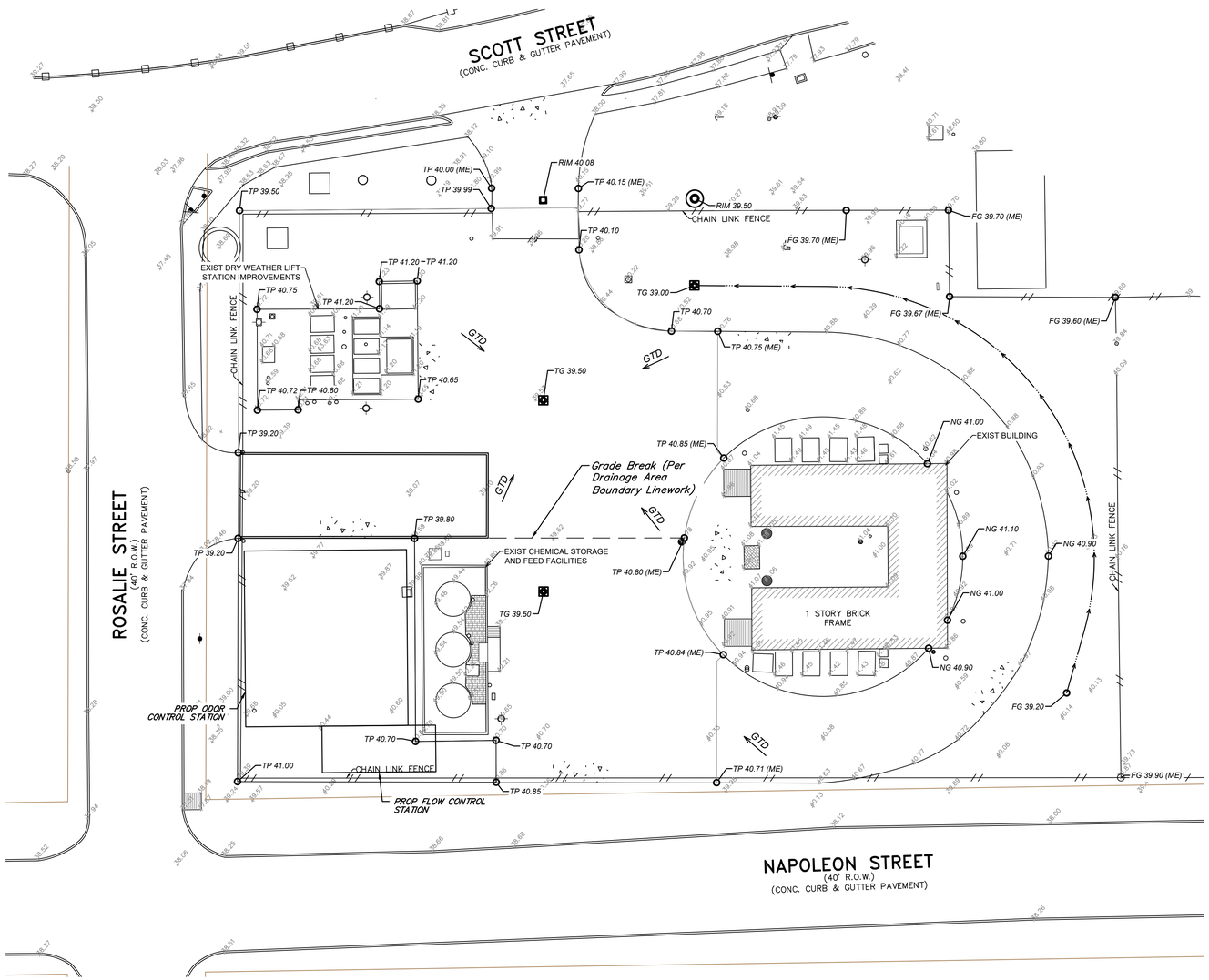
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: 1"=20' VERT:
CATEGORY NO. 0-C-19 SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY JMF

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

| | | |

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





0 5 10 20 40 60

SCALE: 1" = 20'

LEGEND

- PROPOSED TOP OF BANK
- STORM SEWER w/ "E" INLET
- SWALE CENTERLINE
- ME — MATCH EXISTING
- TP 250.50 — PROPOSED TOP OF PAVEMENT ELEVATION
- FG: 250.50 — PROPOSED FINISHED GRADE ELEVATION
- FL 250.50 — PROPOSED FLOWLINE ELEVATION
- NG 250.50 — EXISTING NATURAL GROUND ELEVATION
- PROPERTY LINE
- PROPOSED FENCE
- GTD — GRADE TO DRAIN

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1 LIFT STATION REHABILITATION

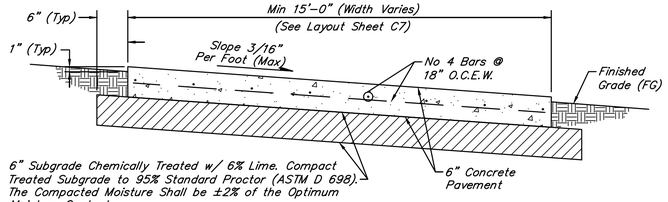
SITE GRADING PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: 1"=20' VERT:
CATEGORY NO. 0-C-21 SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY JMF

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\SITE\Plans\00050-0099-01 CIVIL SHEETS.dwg Jul 11,2025 - 2:32pm kjk

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



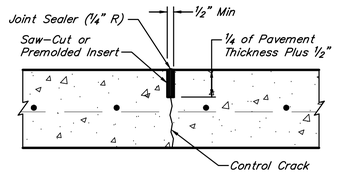
6" Subgrade Chemically Treated w/ 6% Lime. Compact Treated Subgrade to 95% Standard Proctor (ASTM D 698). The Compacted Moisture Shall be ±2% of the Optimum Moisture Content.

NOTES:

1. Driveway adjacent to proposed plant structures shall have isolation joints (See detail this sheet).
2. Subgrade shall be prepared in accordance with applicable sections of the geotechnical investigation ALPHA Report No. H221795 by ALPHA Testing dated July 21, 2022.

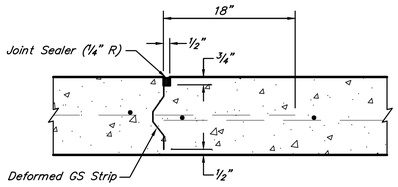
TYPICAL CONCRETE PAVEMENT SECTION

NOT TO SCALE



SAW-CUT CONTROL JOINT

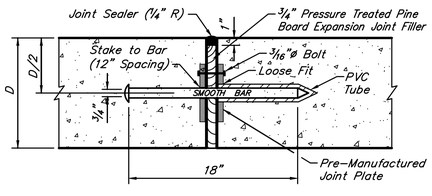
NOT TO SCALE



KEYED CONSTRUCTION JOINT

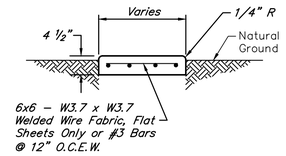
NOT TO SCALE

NOTE: "D" equals pavement thickness.



EXPANSION JOINT

NOT TO SCALE

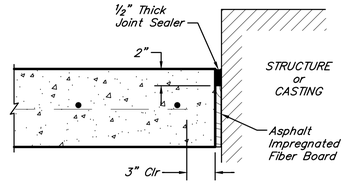


SIDEWALK NOTES:

1. Provide tooled or saw-cut control or keyed construction joints at every 4' and expansion joints at every 20'. (See details this sheet)
2. Slope concrete sidewalks 1/4" per foot to drain away from concrete slabs and foundations toward the proposed drainage system.

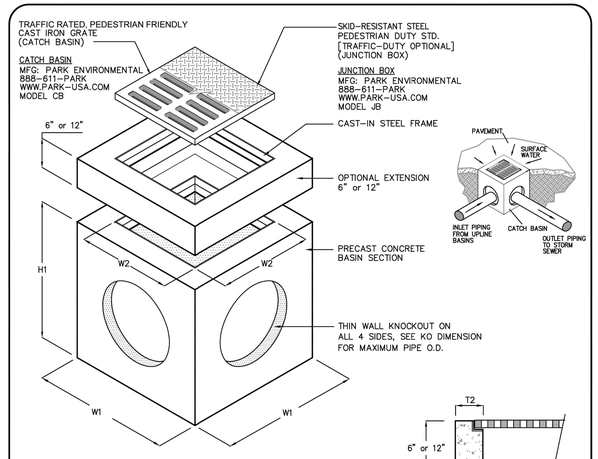
TYPICAL CONCRETE PAD AND SIDEWALK DETAIL

NOT TO SCALE



TYPICAL ISOLATION JOINT

NOT TO SCALE



MODEL #		DIMENSIONS								
CATCH BASIN	JUNCTION BOX [2]	W1	W2	H1	H2	T1	T2	KO	GRATE SIZE	WEIGHT LBS
CB-12[1]	JB-12	15"	10"	21"	18"	3"	2½"	10"	12"x12"x1"	180
CB-14	JB-14	20"	14"	28"	24"	4"	3"	12"	14"x14"x1½"	600
CB-18	JB-18	24"	18"	34"	30"	4"	4"	15"	18"x18"x1½"	1,000
CB-20	JB-20	26"	18"	34"	30"	4"	4"	17"	20"x20"x1½"	1,335
CB-24	JB-24	32"	22"	41"	36"	5"	5"	22"	24"x24"x2"	2,245
CB-27	JB-27	37"	25"	42"	36"	6"	6"	24"	27"x27"x2"	2,875
CB-30	JB-30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"	3,675
CB-36	JB-36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"	4,585

1. CB12 CATCHBASIN IS RATED FOR PEDESTRIAN LOADING. ALL OTHERS ARE TRAFFIC DUTY.
2. ALL JUNCTION BOXES ARE STANDARD PEDESTRIAN DUTY OR OPTIONAL TRAFFIC DUTY.

SPECIFICATIONS

CONCRETE : Class II concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

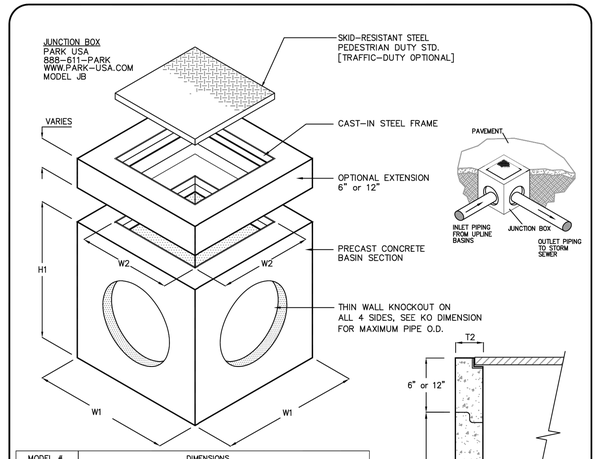
C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 35.

PARK ENVIRONMENTAL EQUIPMENT 888-611-PARK www.park-usa.com

"Expect the Best"

CATCH BASIN MODEL CB - 12" THRU 36"
JUNCTION BOX MODEL JB - 12" THRU 36"

SCALE	NONE	DWG. NO.	REV.
DATE	2010	CBJB36	A



MODEL #	DIMENSIONS								
JUNCTION BOX[1]	W1	W2	H1	H2	T1	T2	KO	GRATE SIZE	WEIGHT LBS
JB-12	15"	10"	21"	18"	3"	2½"	10"	12"x12"x1"	180
JB-14	20"	14"	28"	24"	4"	3"	12"	14"x14"x1½"	600
JB-18	24"	16"	34"	30"	4"	4"	15"	18"x18"x1½"	1,000
JB-20	26"	18"	34"	30"	4"	4"	17"	20"x20"x1½"	1,335
JB-24	32"	22"	41"	36"	5"	5"	22"	24"x24"x2"	2,245
JB-27	37"	25"	42"	36"	6"	6"	24"	27"x27"x2"	2,875
JB-30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"	3,675
JB-36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"	4,585
JB-48	60"	48"	54"	48"	6"	6"	44"	38"x38"x2"	7,395

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SPECIFICATIONS

CONCRETE: Class I/II concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

COVER & FRAME: All steel fabrication shall be in accordance to AWA D1.1. Steel shall be ASTM A36 carbon steel, and hot-dipped galvanized after fabrication in accordance to ASTM A123

PROJECT:	
CUSTOMER:	
ENGINEER:	
ORDER #:	
PROJ. #:	
DATE:	

888.611.PARK www.park-usa.com PARK USA DESIGN FOR WATER

JUNCTION BOX MODEL JB – 12" THRU 48"

PM	DRN	ENG	DWG. NO.	REV.
DATE	06/16		JB-01	A

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

CIVIL DETAILS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: NTS VERT:

CATEGORY NO. 0-C-22 SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\SITE\Plans\00050-0099-01 CIVIL SHEETS.dwg Jul 11,2025 – 2:33pm kjk

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

LEGEND

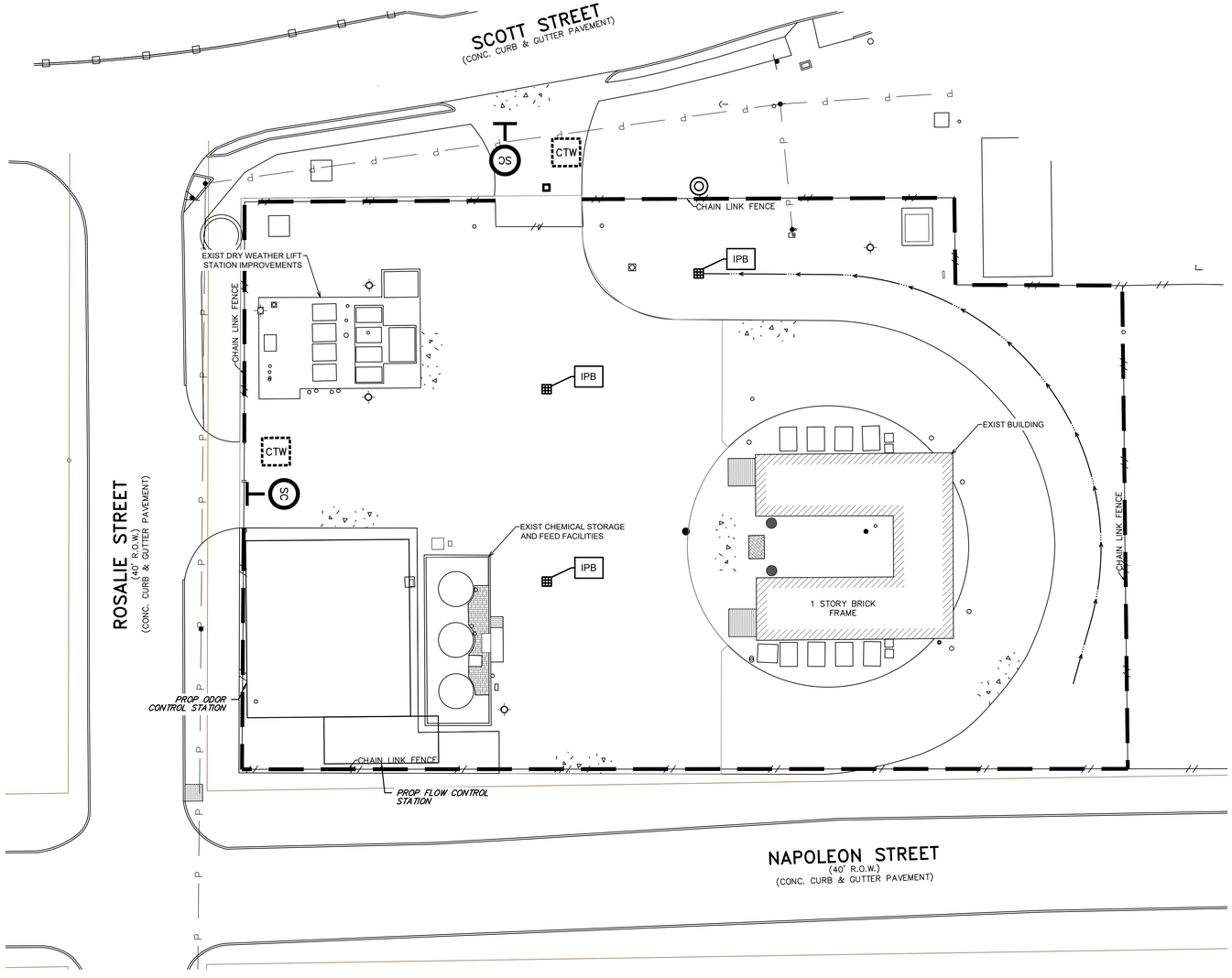
CTW — CONCRETE TRUCK WASHOUT

X — RFB — X — REINFORCED FILTER FABRIC BARRIER

IPB — INLET PROTECTION BARRIER FOR STAGE II INLETS

SS — STABILIZED CONSTRUCTION ENTRANCE

PROPERTY LINE





0 5 10 20 40 60

SCALE: 1" = 20'

BENCH MARK
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T.B.M. "A"
A CHISELED SQUARE ON THE BULL NOSE OF THE ESPLANADE LOCATED ON WEST LAKE HOUSTON PARKWAY APPROXIMATELY 970 FEET NORTH OF THE CENTERLINE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.
ELEVATION = 55.34 FEET NAVD 88 (2001 ADJUSTMENT)

T.B.M. "B"
A CHISELED SQUARE ON TOP OF A "B-B" INLET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.
ELEVATION = 53.67 FEET NAVD 88 (2001 ADJUSTMENT)

100-YEAR FLOOD PLAIN
ACCORDING TO MAP No. 48201C0510L OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR HARRIS COUNTY, TEXAS AND INCORPORATED AREAS, DATED JUNE 18, 2007, THE SUBJECT TRACT IS SITUATED WITHIN UNSHADED ZONE "X"; DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN (500-YEAR FLOOD).

NOTES:

1. THERE ARE ACTIVE GAS LINES ON SITE. CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 A MINIMUM OF 48 HOURS PRIOR TO MOBILIZATION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.
2. CONTRACTOR TO REFER TO GEOTECHNICAL ENGINEERING REPORT NO. 24.14.022 PREPARED BY TOLUNAY WONG ENGINEERS FOR RECOMMENDATIONS.
3. TEJAS-SOUTHWESTERN PIPELINE CO. & GULF PIPELINE COMPANY (MONUMENT PIPELINE) HAVE REVIEWED THE PROPOSED PIPELINE CROSSINGS AND HAVE PROVIDED A LETTER OF NO OBJECTION DATED 09/03/24.
4. PROJECT WILL NOT ADVERSELY AFFECT ADJOINING PROPERTIES

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date:
CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.
Signature Valid for six months.

Date:
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six months.

Date:
Approved for AT&T Texas / SWBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: _____
P.E. Serial No.: _____
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: JK
JOB NO: 00050-0099-01 DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1 LIFT STATION REHABILITATION

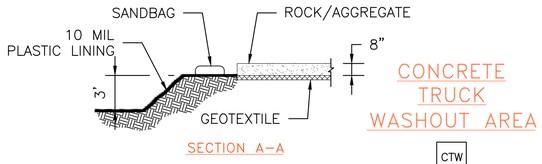
STORM WATER POLLUTION PREVENTION PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: 1"=20' VERT:
CATEGORY NO. 0-C-23 SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY JMF

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\SITE\Plans\00050-0099-01 CIVIL SHEETS.dwg Jul 11,2025 - 2:33pm kjk

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

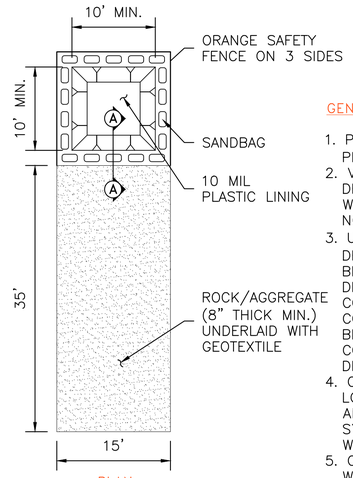


SECTION A–A

CONCRETE TRUCK WASHOUT AREA

CTW

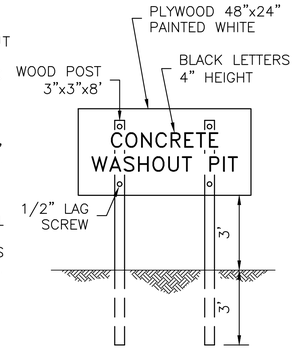
SYMBOL



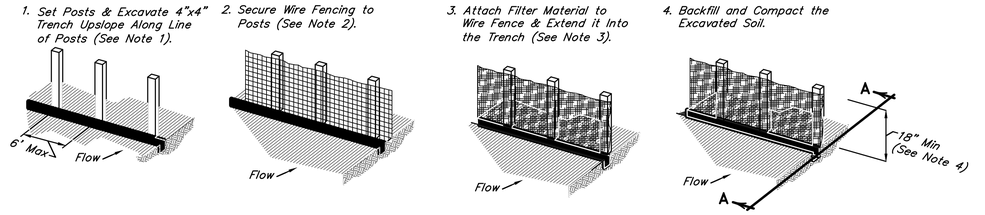
PLAN

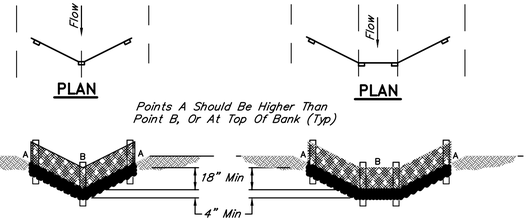
GENERAL NOTES:

1. POST A SIGN READING "CONCRETE WASHOUT PIT" NEXT TO THE PIT.
2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASHOUT THEIR TRUCKS IN THE PIT AND NOWHERE ELSE.
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASHOUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN–SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
4. CONCRETE WASHOUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.



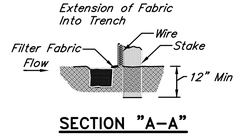
SIGN DETAIL
(OR EQUIVALENT)





"V–DITCH" SECTION/ELEVATION

TRAPEZOIDAL SECTION/ELEVATION



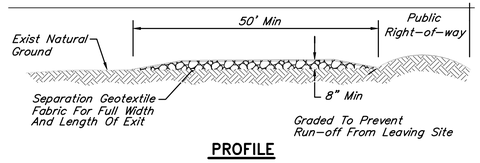
SECTION "A–A"

CONSTRUCTION NOTES:

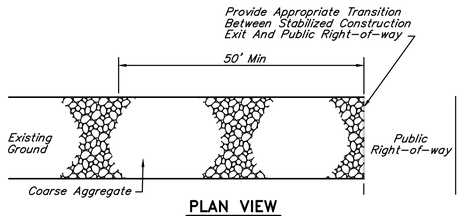
1. Set 2"x2" wooden stakes spaced a maximum of 6' apart & embedded 12" min.
2. Woven wire fence to be fastened securely to fence posts with staples.
3. Filter cloth to be fastened to woven wire fence with ties spaced every 24" at top & midsection.
4. Minimum height of filter should be 18" & a maximum of 36" above natural ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped 6" at the posts, & folded.

REINFORCED FILTER FABRIC BARRIER

NOT TO SCALE



PROFILE



PLAN VIEW

CONSTRUCTION NOTES:

1. Length shall be as shown on the construction drawings, but not less than 50 feet.
2. Thickness shall be not less than 8 inches.
3. Width shall be not less than full width of all points of ingress or egress.
4. Stabilization for other areas shall have the same aggregate thickness and width requirements as the stabilized construction exit, unless otherwise shown on the construction drawings.
5. Stabilized area may be widened or lengthened to accommodate a truck washing area. an outlet sediment trap must be provided for the truck washing area.
6. Stabilized construction exit shall be maintained free of sediment for the duration of the project.

STABILIZED CONSTRUCTION EXIT

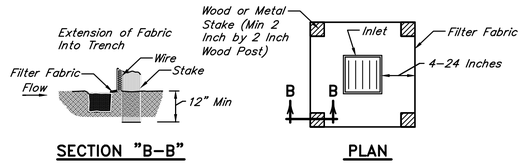
NOT TO SCALE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. Prior to start of construction, Contractor shall install erosion and sedimentation controls at locations shown on Contract Construction Plans.
2. Contractor shall inspect all erosion and sedimentation control systems specified herein, at a minimum of once a week.
3. Contractor shall maintain, repair and/or replace damaged erosion and sedimentation control system throughout the duration of the contract (no separate pay).
4. Contractor shall provide protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials.
5. Contractor shall locate fuel/material storage areas away from storm water conveyance systems. Contractor shall use silt fencing, hay bales, or berms around fuel storage areas (no separate pay).
6. Contractor shall advise Owner immediately, verbally, and in writing, of any fuel or toxic material spills onto the project/construction area and the action taken to remedy the problem.
7. Contractor is responsible for disposing of his fuels, materials, and contaminated excavations in a legally approved manner (no separate pay).
8. Contractor is responsible for complying with all applicable environmental laws.
9. Contractor is responsible for providing adequately maintained sanitary facilities, a minimum of 150 feet away from the water well, unless the facilities are of a sealed, leak–proof type.
10. At completion of the contract, Owner and/or Owner's representative with the Contractor shall examine erosion and sedimentation control system before relieving Contractor of his maintenance responsibilities.
11. Contractor shall be responsible for street cleaning, on a daily basis, all mud and dirt deposited on the existing pavement due to his construction activity.

MANHOLE / INLET PROTECTION NOTES:

1. Inlets and manholes that are not complete and/or are subject to conveying storm water flows are to be protected to prevent sediment from entering the proposed or existing storm sewer system.
2. Protection shall consist of one layer of 3x12–inch oak timbers, one (1) inch apart, covered with one layer of woven polypropylene or polyester filter fabric (Exxon GTF 100S, Phillips SUPAC 4WS[UV] or approved equal) held in place with 1/2" staples. Timbers shall be held in place with two (2) 2x4's nailed securely to each timber over the filter fabric. The filter fabric shall extend beyond the perimeter of the oak timbers as to ensure one (1) foot of bury between the manhole or inlet and the surrounding soil as shown.
3. Filter fabric to be cleaned or replaced when it ceases to function properly or as directed by the engineer.
4. Contractor may submit plans for alternate methods of protection. These alternate methods must be approved prior to use in the field.
5. No separate payment shall be made for inlet and manhole protection. Include the cost in the unit price for the inlets and manholes.



SECTION "B–B"

PLAN

CONSTRUCTION NOTE:

1. See Construction Notes for Filter Fabric Fence.

SILT FENCE INLET PROTECTION BARRIER

NOT TO SCALE

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.

Signature Valid for six months.

Date:

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities – not to be used for conflict verification.)

Signature Valid for six months.

Date:

Approved for AT&T Texas / SWBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer:
P.E. Serial No.:
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: JK
JOB NO: 00050–0099–01 | DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

STORM WATER POLLUTION PREVENTION PLAN DETAILS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

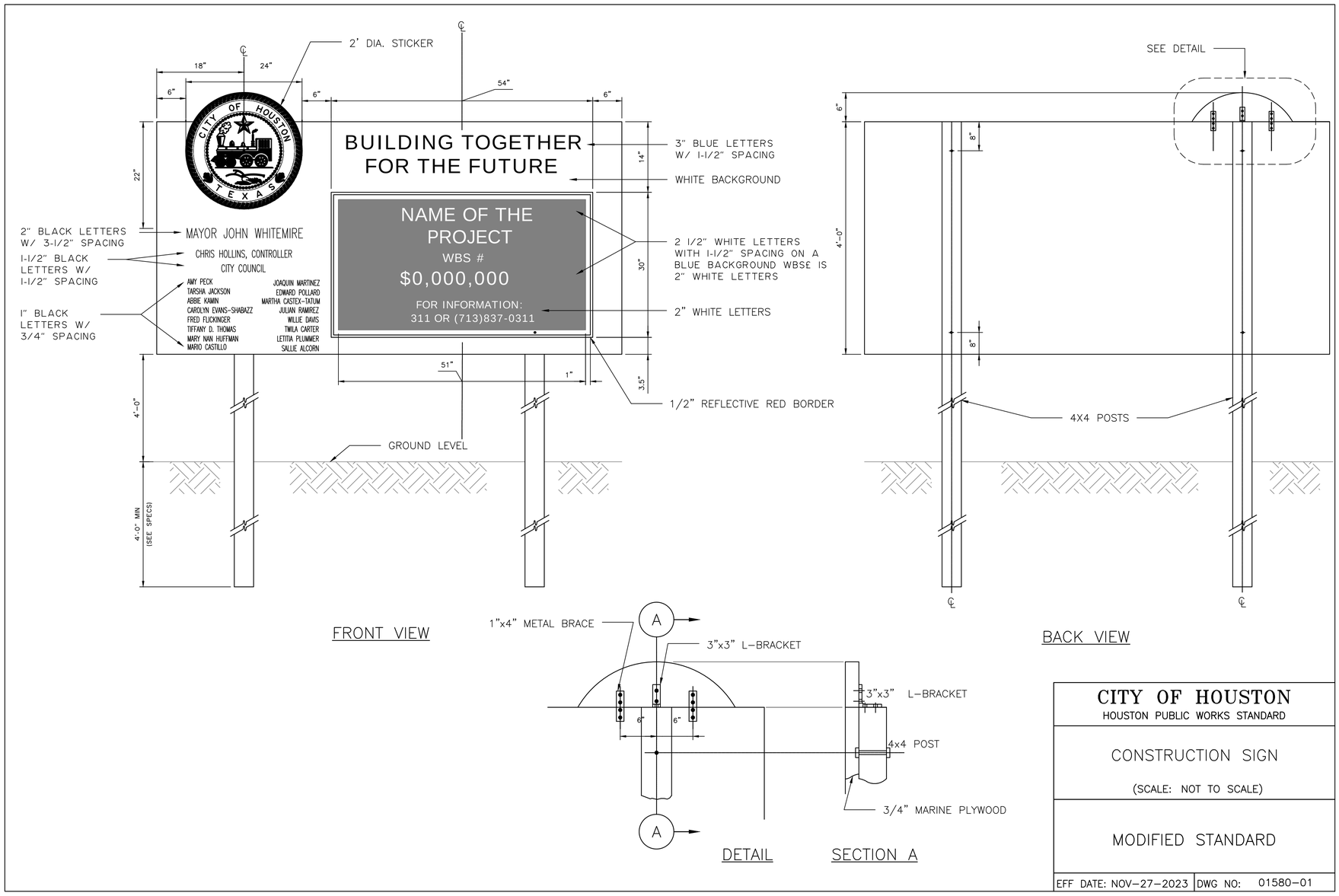
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CATEGORY NO. 0–C–24 SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY JMF

K:\00050\00050–0099–01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\SITE\Plans\00050–0099–01 CIVIL SHEETS.dwg Jul 11,2025 – 2:33pm kjk

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THEIR APPLICABILITY, ADEQUACY AND SAFETY. NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

CONSTRUCTION SIGN

(SCALE: NOT TO SCALE)

MODIFIED STANDARD

EFF DATE: NOV-27-2023 | DWG NO: 01580-01

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

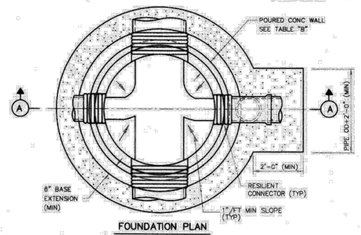
SCOTT STREET No. 1
LIFT STATION REHABILITATION

CIVIL DETAILS
SHEET 1 OF 6

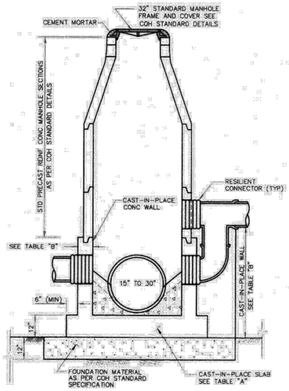
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE NOT TO SCALE HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-25 SHEET NO. 24 OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



FOUNDATION PLAN



ELEVATION A

NOTES:

1. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
2. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
3. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.

NOTES ON USE OF STANDARD DETAIL

TABLE "A"

BASE SLAB REINFORCING AND THICKNESS

MH INSIDE DIA (FT)	DEPTH TO INV (FT)	BASE THICKNESS	REINFORCING (E.W. T & B)
8	≤ 20	1'-0"	# 6 @ 10"
	≤ 25	1'-2"	# 6 @ 8"
	≤ 30	1'-4"	# 6 @ 7"
	≤ 40	1'-8"	# 6 @ 6"
	≤ 50	1'-8"	# 6 @ 6"
	≤ 60	1'-10"	# 6 @ 6"
6	≤ 15	1'-0"	# 5 @ 8"
	≤ 20	1'-0"	# 5 @ 8"
	≤ 25	1'-2"	# 5 @ 7"
	≤ 30	1'-2"	# 5 @ 6"
	≤ 40	1'-2"	# 6 @ 8"
	≤ 50	1'-4"	# 6 @ 8"
	≤ 60	1'-4"	# 6 @ 7"
5	≤ 15	1'-0"	# 5 @ 8"
	≤ 20	1'-0"	# 5 @ 7"
	≤ 25	1'-0"	# 5 @ 6"
	≤ 30	1'-0"	# 6 @ 10"
	≤ 40	1'-2"	# 6 @ 10"
	≤ 50	1'-2"	# 6 @ 9"
	≤ 60	1'-2"	# 6 @ 8"
4	≤ 20	1'-0"	# 5 @ 8"
	≤ 25	1'-0"	# 5 @ 8"
	≤ 30	1'-0"	# 5 @ 7"
	≤ 40	1'-0"	# 5 @ 10"

TABLE "B"

WALL REINFORCING AND THICKNESS

MH INSIDE DIA (FT)	DEPTH TO PIPE TO INV (FT)	MAXIMUM CAST-IN-PLACE WALL HEIGHT	WALL THICKNESS	REINFORCING AT EACH FACE VERTICAL	REINFORCING AT EACH FACE HORIZONTAL
8	≤ 20	8'-0"	0'-10"	# 6 @ 12"	# 5 @ 12"
	≤ 25	8'-6"	0'-10"	# 6 @ 10"	
	≤ 30	7'-0"	0'-10"	# 6 @ 8"	
	≤ 40	8'-0"	1'-0"	# 6 @ 8"	
	≤ 50	9'-0"	1'-2"	# 6 @ 8"	
	≤ 60	10'-0"	1'-4"	# 6 @ 8"	
6	≤ 15	5'-0"	0'-8"	# 5 @ 10"	# 5 @ 12"
	≤ 20	5'-8"	0'-8"	# 5 @ 8"	
	≤ 25	6'-0"	0'-8"	# 5 @ 8"	
	≤ 30	6'-0"	0'-10"	# 5 @ 8"	# 5 @ 8"
	≤ 40	7'-0"	0'-10"	# 5 @ 8"	
	≤ 50	7'-0"	1'-0"	# 6 @ 8"	
	≤ 60	8'-0"	1'-2"	# 6 @ 7"	
5	≤ 15	5'-0"	0'-8"	# 5 @ 8"	# 4 @ 12"
	≤ 20	5'-4"	0'-8"	# 5 @ 7"	
	≤ 25	5'-8"	0'-10"	# 5 @ 6"	
	≤ 30	6'-0"	0'-10"	# 6 @ 10"	# 5 @ 12"
	≤ 40	6'-4"	0'-10"	# 6 @ 10"	
	≤ 50	6'-6"	1'-0"	# 6 @ 8"	
	≤ 60	7'-0"	1'-0"	# 6 @ 8"	
4	≤ 20	4'-4"	0'-8"	# 5 @ 10"	# 4 @ 12"
	≤ 25	5'-0"	0'-8"	# 5 @ 10"	
	≤ 30	5'-6"	0'-10"	# 6 @ 12"	
	≤ 40	5'-0"	0'-10"	# 6 @ 12"	

NOTE TO SPECIFIER:

1. TABLES "A" AND "B" WILL BE USED TO DESIGN THE CAST-IN-PLACE BASE AND WALL FOR VARIOUS MANHOLE DIAMETER AND DEPTH.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

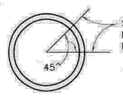
SANITARY SEWER
PRECAST CONCRETE MANHOLE
WITH CAST-IN-PLACE BASE
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010 DWG NO: 02082-08

PIPE TAPPING SCHEDULE

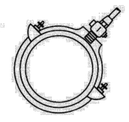
WATER MAIN TYPE AND DIAMETER	SERVICE SIZE 3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
4" ASBESTOS (EXISTING) CEMENT	WBSS	WBSS	DSS, WBSS	DSS, WBSS
4" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
16" AND UP CAST IRON OR DUCTILE IRON	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP ASBESTOS (EXISTING) CEMENT	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP PVC (AWWA C900)	DWBSS	DWBSS	DWBSS	DWBSS

DSS – DUAL STRAP SADDLES
WBSS – WIDE BAND STRAP SADDLES
DWBSS – DUAL WIDE BAND STRAP SADDLES



SERVICE TAPS TO BE MADE IN THIS ZONE EXCEPT FOR PVC FASTTAP

BLOW-OFF & CHLORINATION TAPS ARE MADE IN VERTICAL POSITION.



WIDE BAND SINGLE SADDLE OR DUAL SADDLES

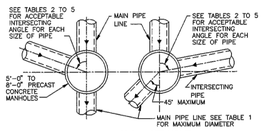
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SERVICE TAPS

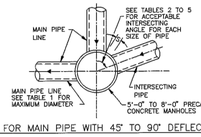
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010 DWG NO: 02512-02

NOTES ON USE OF STANDARD DETAIL 02082-03



FOR MAIN PIPES FROM STRAIGHT THROUGH TO 45° DEFLECTION



FOR MAIN PIPE WITH 45° TO 90° DEFLECTION

TABLE 1
MAXIMUM MAIN PIPE
DIAMETER (I.D) IN INCHES

MANHOLE DIAMETER (FT)	STRAIGHT THROUGH TO 45° DEFLECTION	WITH 90° DEFLECTION	TABLE TO BE USED
5	36	27	2
6	42	33	3
7	48	36	4
8	60	42	5

TABLE 2
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 5'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES 8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"
8	49	50	54	58	61	66	69	73	77	82	86
10		53	57	61	64	68	71	76	79	84	88
12			61	65	68	72	75	80	83	88	–
15				68	71	75	79	83	87	90	–
18					75	79	82	87	90	–	–
21						83	86	90	–	–	–
24							90	–	–	–	–
27								–	–	–	–
30									–	–	–
33										–	–
36											–

TABLE 3
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 6'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES 8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"
8	40	42	45	49	51	54	57	61	63	67	70	78
10		44	47	50	53	56	59	62	65	69	72	79
12			50	54	56	60	62	66	68	72	75	83
15				57	59	62	65	69	71	75	78	85
18					62	65	68	71	74	78	81	88
21						68	71	74	77	81	84	–
24							74	77	80	84	87	–
27								83	85	89	–	–
30									–	–	–	–
33										–	–	–
36											–	–
42												–

TABLE 4
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 7'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES 8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	48"
8	35	36	39	42	44	47	49	52	54	57	59	65	71
10		38	40	43	45	48	50	53	55	59	61	67	73
12			43	46	48	51	53	56	58	61	64	70	76
15				48	50	53	55	58	61	64	66	72	78
18					58	56	58	61	63	66	69	74	81
21						58	60	63	66	69	71	77	83
24							63	66	68	71	74	79	86
27								70	72	76	78	84	90
30									78	81	83	89	–
33										86	88	–	–
36											–	–	–
42												–	–
48													–

TABLE 5
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 8'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES 8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	48"	54"	60"
8	30	32	34	36	38	41	43	45	47	50	52	56	61	67	74
10		33	35	38	40	42	44	46	48	51	53	58	63	68	77
12			38	40	42	44	46	49	51	53	55	60	65	71	79
15				42	44	47	48	51	53	56	58	62	67	73	81
18					46	49	51	53	55	58	66	64	70	75	83
21						51	53	55	57	60	62	67	72	77	85
24							55	57	59	62	64	69	74	79	89
27								61	63	66	68	73	78	83	–
30									67	70	72	77	82	87	–
33										74	76	81	86	–	–
36											81	86	–	–	–
42												–	–	–	–
48													–	–	–
54														–	–
60															–

NOTES TO SPECIFIER:

1. " * " INDICATES THAT A SPECIAL DESIGN OR THE NEXT LARGER MANHOLE SIZE SHALL BE USED.
2. TABLES 2 TO 5 ARE BASED ON A MIN SEPARATION DISTANCE "Z" OF 16.5" OR INTERSECTION PIPE O.D/2, WHICHEVER IS GREATER, BETWEEN MAIN AND INTERSECTING PIPES ALONG THE MANHOLE INSIDE WALL ARC.
3. PIPE WALL THICKNESS USED IN TABLES 2 TO 5 ARE BASED ON RCP. THE DESIGN ENGINEER MAY CALCULATE TO SEE IF THINNER WALL PIPES CAN MEET THE SEPARATION CRITERIA FOR ANGLES SMALLER THAN THE TABLES ALLOW.
4. LIMITATIONS TO BASE HEIGHT ARE BASED ON RESISTING BUOYANT UPLIFT FORCES BASED ON WATER AT GROUND SURFACE AND A SAFETY FACTOR OF 1.20.
5. A SPECIAL DESIGN IS REQUIRED IF MANHOLE ID IS GREATER THAN 8 FT.

* NOT APPLICABLE (INTERSECTING PIPE GREATER THAN MAIN PIPE)

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

SANITARY SEWER
5'-0" TO 8'-0" DIAMETER
PRECAST CONCRETE MANHOLE NOTES
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 DWG NO: 02082N-03

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

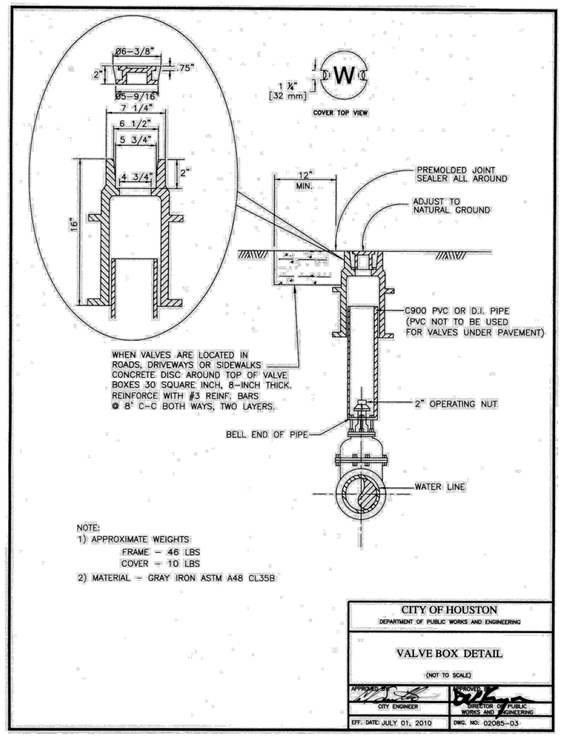
SCOTT STREET No. 1
LIFT STATION REHABILITATION

CIVIL DETAILS
SHEET 2 OF 6

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

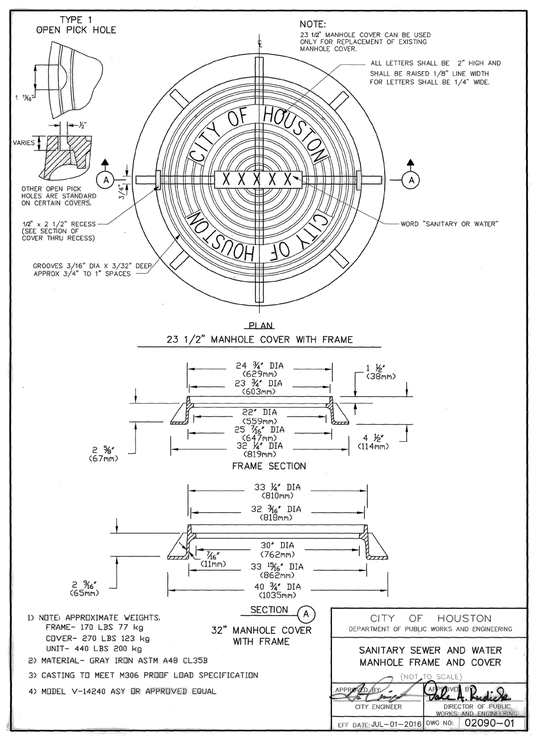
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CATEGORY NO. 0-C-26 SHEET NO. 25 OF XXX
FOR CITY OF HOUSTON USE ONLY

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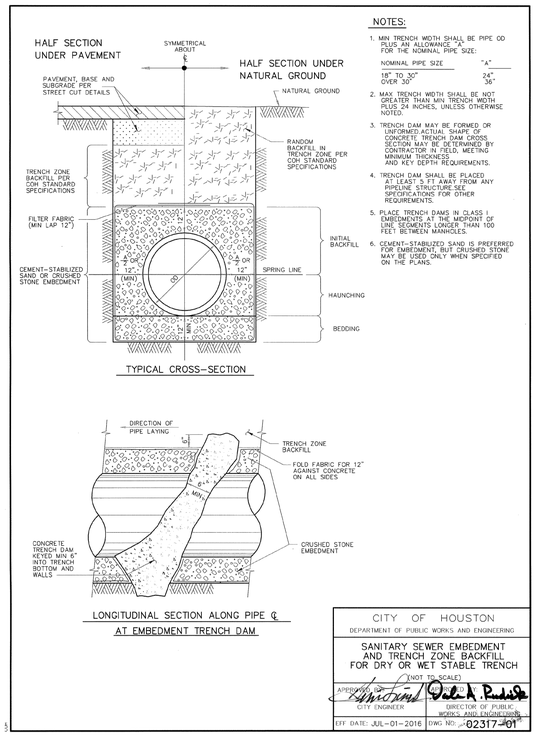
NOTE:
1) APPROXIMATE WEIGHTS
FRAME – 46 LBS
COVER – 10 LBS
2) MATERIAL – GRAY IRON ASTM A48 CL35B

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
VALVE BOX DETAIL	
(NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: JULY 01, 2010	DWG. NO: 02085-03



1) NOTE: APPROXIMATE WEIGHTS.
FRAME- 170 LBS 77 kg
COVER- 270 LBS 123 kg
UNIT- 440 LBS 200 kg
2) MATERIAL- GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) MODEL V-14240 ASY OR APPROVED EQUAL

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SANITARY SEWER AND WATER MANHOLE FRAME AND COVER	
(NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02090-01



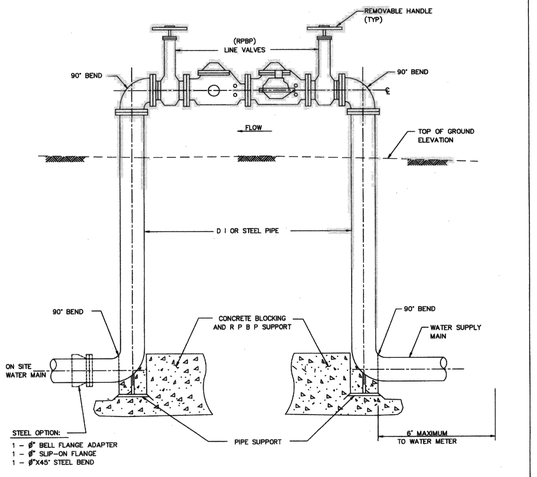
NOTES:
1. MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	36"

2. MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
3. TRENCH DAM MAY BE FORMED OR UNFORMED.ACTUAL SHAPE OF CONCRETE TRENCH DAM CROSS SECTION MAY BE DETERMINED BY CONTRACTOR IN FIELD, MEETING MINIMUM THICKNESS AND KEY DEPTH REQUIREMENTS.
4. TRENCH DAM SHALL BE PLACED AT LEAST 5 FT AWAY FROM ANY PIPELINE STRUCTURE.SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.
5. PLACE TRENCH DAMS IN CLASS I EMBEDMENTS AT THE MIDPOINT OF PIPE SEGMENTS LONGER THAN 100 FEET BETWEEN MANHOLES.
6. CEMENT-STABILIZED SAND IS PREFERRED FOR EMBEDMENT, BUT CRUSHED STONE MAY BE USED ONLY WHEN SPECIFIED ON THE PLANS.

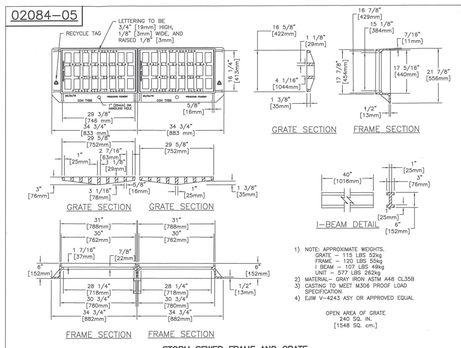
CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SANITARY SEWER EMBEDMENT AND TRENCH ZONE BACKFILL FOR DRY OR WET STABLE TRENCH	
(NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02317-01

GENERAL NOTES:
1. INSULATE REDUCED PRESSURE BACKFLOW PREVENTER TO AVOID FREEZING.
2. REDUCED PRESSURE BACKFLOW PREVENTER'S DISCHARGE OPENING IS TO BE A MINIMUM OF 12 INCHES ABOVE GROUND ELEVATION OR 100 YEAR FLOOD ELEVATION WHICHEVER IS GREATER.



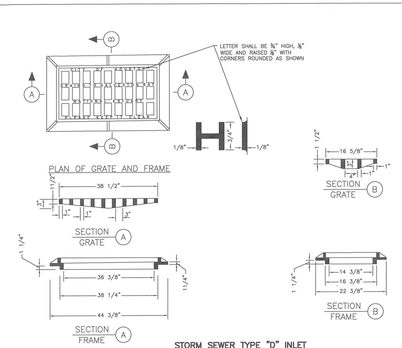
CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
REDUCED PRESSURE BACKFLOW – PREVENTER (R P B P)	
(NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: JULY-01-2010	DWG NO: 02523-01

02084-05



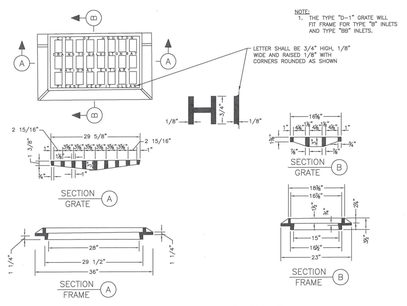
STORM SEWER FRAME AND GRATE
FOR TYPE B-B INLET DOUBLE ASSEMBLY
NTS

02084-06



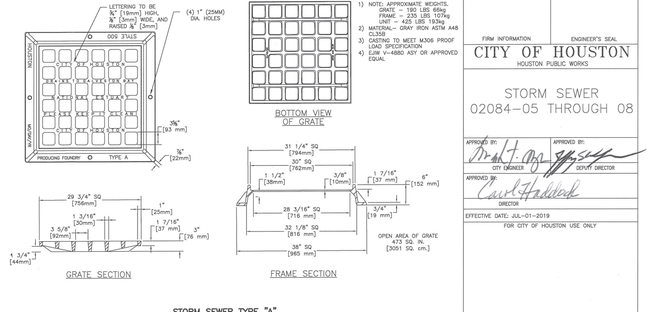
STORM SEWER TYPE "D" INLET
GRATE AND FRAME
NTS

02084-07



STORM SEWER TYPE "D-1" INLET
GRATE AND FRAME
NTS

02084-08



STORM SEWER TYPE "A"
INLET GRATE AND FRAME
NTS

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
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NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

CIVIL DETAILS
SHEET 3 OF 6

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-27 SHEET NO. 26 OF XXX
FOR CITY OF HOUSTON USE ONLY

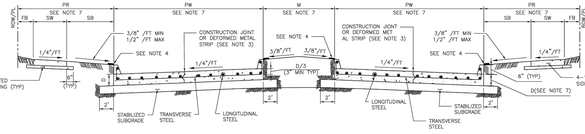
FIRM INFORMATION	ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

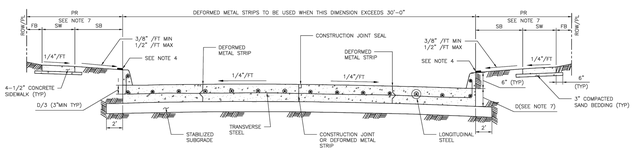
STORM SEWER
02084-05 THROUGH 08

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL-01-2019
FOR CITY OF HOUSTON USE ONLY
SHEET NO.

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



TYPICAL DOUBLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH CURBS



TYPICAL SINGLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH CURBS

TABLE 1

REINFORCING STEEL BAR SIZES AND SPACINGS FOR VARIOUS PAVEMENT THICKNESSES (D) WITH: MAXIMUM TRANSVERSE CONTROL JOINT SPACING = 20'-0"
MAXIMUM EXPANSION JOINT SPACING = 80'-0"
f'c' = 4,000 PSI/28 DAYS AND FY = 60,000 PSI

PAVEMENT THICKNESS 'D' (IN)	PAVEMENT WIDTH 'PW' (FT)	LONGITUDINAL STEEL									TRANSVERSE STEEL		
		#4 BARS			#5 BARS			#6 BARS			#4 BARS	#5 BARS	#6 BARS
		NUMBER OF BARS	SPACING (IN)	END BAR SPACING (IN)	NUMBER OF BARS	SPACING (IN)	END BAR SPACING (IN)	NUMBER OF BARS	SPACING (IN)	END BAR SPACING (IN)	SPACING (IN)	SPACING (IN)	SPACING (IN)
6	28	17	20.50	4.00	–	–	–	–	–	–	36	–	–
7	25	17	18.25	4.00	–	–	–	–	–	–	36	–	–
7	35	24	18.00	3.00	–	–	–	–	–	–	36	–	–
7	36	25	17.75	3.00	–	–	–	–	–	–	36	–	–
7	37	25	18.25	3.00	–	–	–	–	–	–	36	–	–
7	41	28	18.00	3.00	–	–	–	–	–	–	36	–	–
7	45	31	17.75	3.75	–	–	–	–	–	–	36	–	–
8	25	20	15.50	2.75	13	24.50	3.0	–	–	–	36	36	–
8	34	27	15.50	2.50	17	25.00	4.0	–	–	–	36	36	–
8	35	27	16.00	2.00	18	24.25	4.0	–	–	–	36	36	–
8	36	28	15.75	3.25	18	25.00	3.0	–	–	–	30	36	–
8	44	24	15.75	4.00	22	24.75	4.0	–	–	–	30	36	–
8	45	35	15.75	2.25	23	24.25	3.0	–	–	–	30	36	–
9	25	22	14.00	3.00	14	22.50	4.0	–	–	–	36	36	–
9	34	31	13.50	2.00	19	22.25	3.5	–	–	–	30	36	–
9	35	31	13.75	2.75	20	21.75	3.5	–	–	–	30	36	–
9	36	32	13.75	3.00	21	21.25	3.5	–	–	–	30	36	–
9	44	39	13.75	2.75	25	21.75	3.0	–	–	–	24	36	–
9	45	39	14.00	4.00	26	21.25	4.5	–	–	–	24	36	–
10	25	24	12.75	3.50	17	18.25	4.0	–	–	–	36	36	36
10	34	33	12.50	4.00	21	20.00	4.0	–	–	–	30	36	36
10	35	34	12.50	3.75	23	18.75	4.0	–	–	–	30	36	36
10	36	35	12.50	3.50	24	18.50	3.0	–	–	–	30	36	36
10	44	44	12.00	4.00	29	18.50	4.5	–	–	–	24	36	36
10	45	44	12.50	3.00	29	19.00	3.0	–	–	–	24	36	36
11	25	27	11.25	3.00	17	18.25	4.0	12	26.75	3	36	36	36
11	34	36	11.50	2.75	24	17.50	2.5	17	25.00	4	24	36	36
11	35	37	11.50	3.00	24	18.00	3.0	17	25.75	4	24	36	36
11	36	40	11.00	2.00	25	17.75	3.0	17	26.50	4	24	36	36
11	44	48	11.125	2.50	30	18.00	3.0	21	26.00	4	24	36	36
11	45	49	11.125	3.00	31	17.75	4.0	22	25.50	3	24	36	36
12	25	–	–	–	19	16.25	4.0	13	24.50	3	36	36	36
12	34	–	–	–	26	16.00	4.0	18	23.50	4	24	36	36
12	35	–	–	–	26	16.50	4.0	19	23.00	3	24	36	36
12	36	–	–	–	27	16.25	4.5	20	22.25	4.5	24	36	36
12	44	–	–	–	33	16.25	4.0	24	22.50	5	24	30	36
12	45	–	–	–	35	15.75	3.0	25	22.25	3	24	30	36

MINIMUM LAP LENGTH (L):
A. # 4 BARS ; L = 22 INCHES
B. # 5 BARS ; L = 27 INCHES
C. # 6 BARS ; L = 32 INCHES

NOTES:
1. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 15'-0".
2. ALL EARTHEN AREAS ARE TO BE HYDROMULCHED UNLESS SHOWN OTHERWISE ON DRAWINGS.
3. CONTRACTOR MAY SAW CUT IN LIEU OF DEFORMED METAL STRIP.
4. USE STRIP OF SOD GRASS TO PREVENT EROSION UNTIL STAND OF GRASS IS ESTABLISHED.
5. AN EQUAL OR LARGER AREA OF WELDED REINFORCEMENT BAR CONFORMING TO ASTM A497, MAY BE SUBSTITUTED FOR REBARS LISTED IN TABLE 1.
6. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SW) ACCORDING TO IDM REQUIREMENTS, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.
7. REFER TO CONTRACT DRAWINGS FOR PAVEMENT WIDTH (PW) AND PAVEMENT THICKNESS (D), MEDIAN (M), PEDESTRIAN REALM (PR), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.

APPROVED BY:	APPROVED BY:
Digitally signed by Sulaiman Bauwar	Digitally signed by HANG NGUYEN
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: Digitally signed by Carl Haddock	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV-27-2023	DWG NO. 02751-01

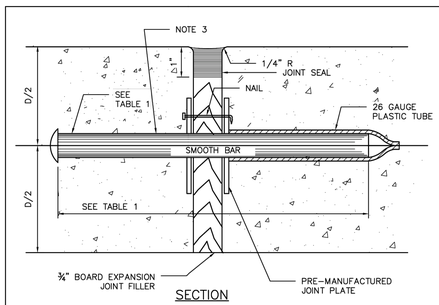
CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

CONCRETE PAVEMENT DETAILS

FOR CITY OF HOUSTON USE ONLY

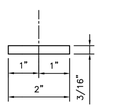
DRAWING SCALE
NOT TO SCALE

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ASSUMES RESPONSIBILITY FOR DESIGN ADEQUACY AND FOR MEETING SITE SPECIFIC NEEDS. ANY REVISIONS TO THIS STANDARD MUST BE SUBMITTED TO AND APPROVED BY THE CITY OF HOUSTON. WHISKER, THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.



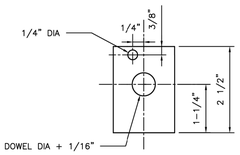
SECTION

DOWEL TYPE EXPANSION JOINT



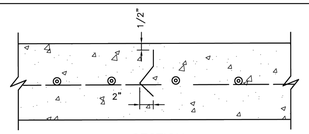
PLAN VIEW

JOINT PLATE



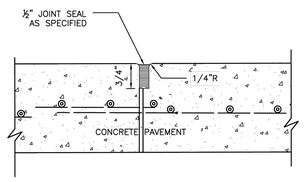
ELEVATION VIEW

JOINT PLATE



SECTION

DEFORMED METAL STRIP



SECTION

CONSTRUCTION JOINT SEAL

TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS		
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
6	3/4	18	12
7	1	18	12
8	1	18	12
9	1 1/4	18	12
10	1 1/4	18	12
11	1 1/4	18	12
12	1 1/4	18	12

NOTES:
1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS. UNITS TO BE SPACED 12" CENTER ON CENTER.
2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS.
3. CENTER DOWEL HORIZONTALLY ON JOINT.
4. CENTER DOWEL VERTICALLY IN CONCRETE BASE. EXTEND THICKENED CONCRETE AS NEEDED TO MAINTAIN 3" MIN COVER.
5. CITY OF HOUSTON APPROVED PRODUCTS MAY BE USED AS JOINT PLATE ALTERNATIVE.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

PAVEMENT EXPANSION AND CONSTRUCTION JOINT DETAILS

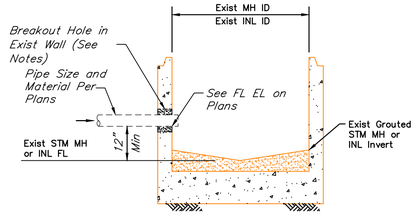
(SCALE: NOT TO SCALE)

APPROVED BY:

Digitally signed by Sulaiman Bauwar	Digitally signed by Carl Haddock
CITY ENGINEER	DIRECTOR OF HPW
Digitally signed by HANG NGUYEN	
CITY TRAFFIC ENGINEER	
EFF DATE: NOV-27-2023	DWG NO: 02752-01

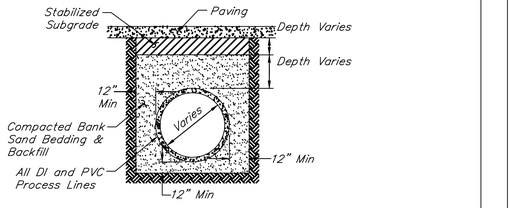
CONTRACTOR NOTES:

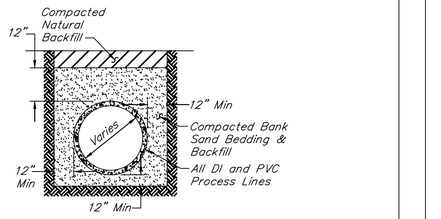
1. The existing storm manhole or storm inlet wall penetration shall be watertight sealed with an approved chemical resistant non-shrink grout.
2. Contractor shall restore the storm manhole, storm inlet, or any adjacent areas, disturbed by the construction of the tie-in to existing or better condition.



1690 – EXISTING STORM MANHOLE OR STORM INLET DRAIN LINE TIE-IN DETAIL

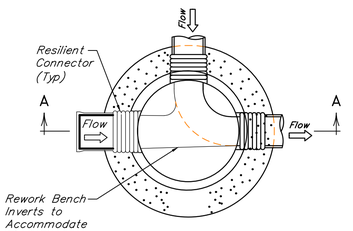
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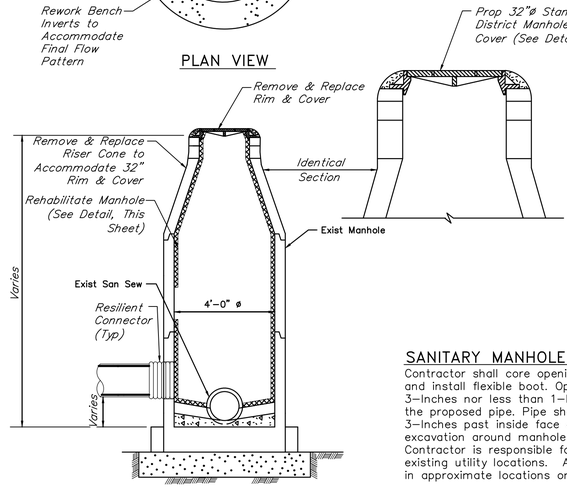


1525 – CLASS "C" BEDDING FOR PLANT PROCESS PIPING DETAIL

NOT TO SCALE



PLAN VIEW



SECTION "A-A"

NOTES:

1. Any damage to existing manhole is responsibility of Contractor. Contractor to perform repairs or manhole replacement at no additional cost.
2. Provide backfill to match adjacent pipe trench backfill per standard specification.

SANITARY MANHOLE CONNECTION NOTE:

Contractor shall core opening in existing manhole wall and install flexible boot. Opening shall not be more than 3-Inches nor less than 1-Inch greater in diameter than the proposed pipe. Pipe shall not protrude more than 3-Inches past inside face of manhole wall. Backfill excavation around manhole with cement-sand. Contractor is responsible for field verification of all existing utility locations. All existing utilities are shown in approximate locations only.

1636 – CONNECTION TO EXISTING MANHOLE

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025	DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01	DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

CIVIL DETAILS
SHEET 4 OF 6

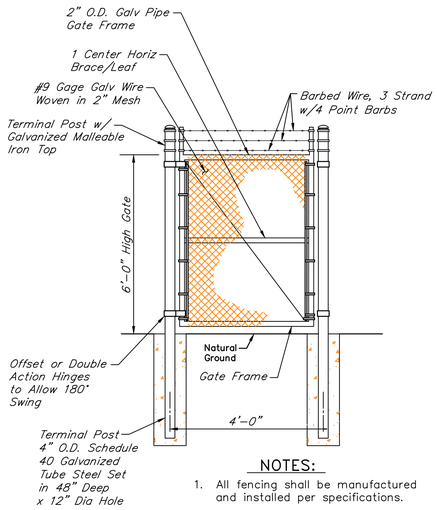
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-28 SHEET NO. 27 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

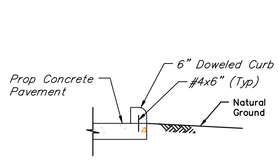


NOTES:

1. All fencing shall be manufactured and installed per specifications.
2. Provide dark green PVC coated fence fabric, posts and hardware. Provide dark green PVC fence slats.

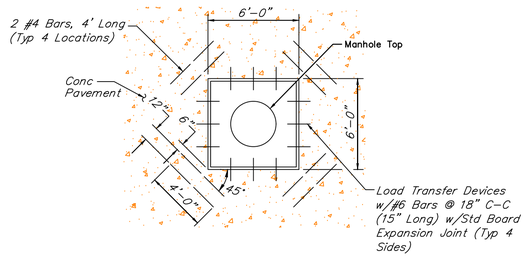
SINGLE CHAIN LINK GATE DETAIL

NOT TO SCALE



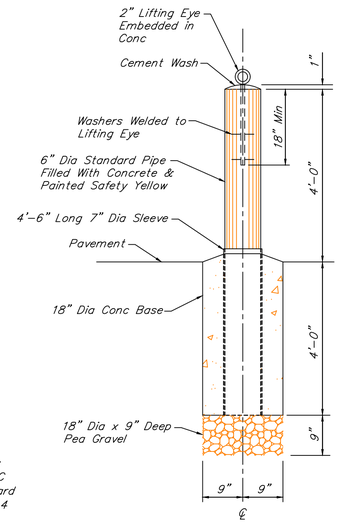
CONCRETE CURB DETAIL

NOT TO SCALE



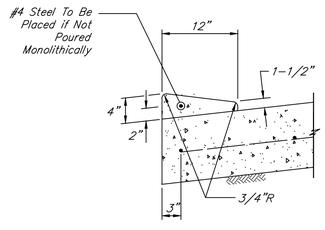
PAVEMENT BLOCK OUT DETAIL

NOT TO SCALE



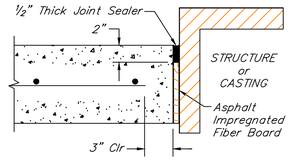
REMOVABLE BOLLARD DETAIL

NOT TO SCALE



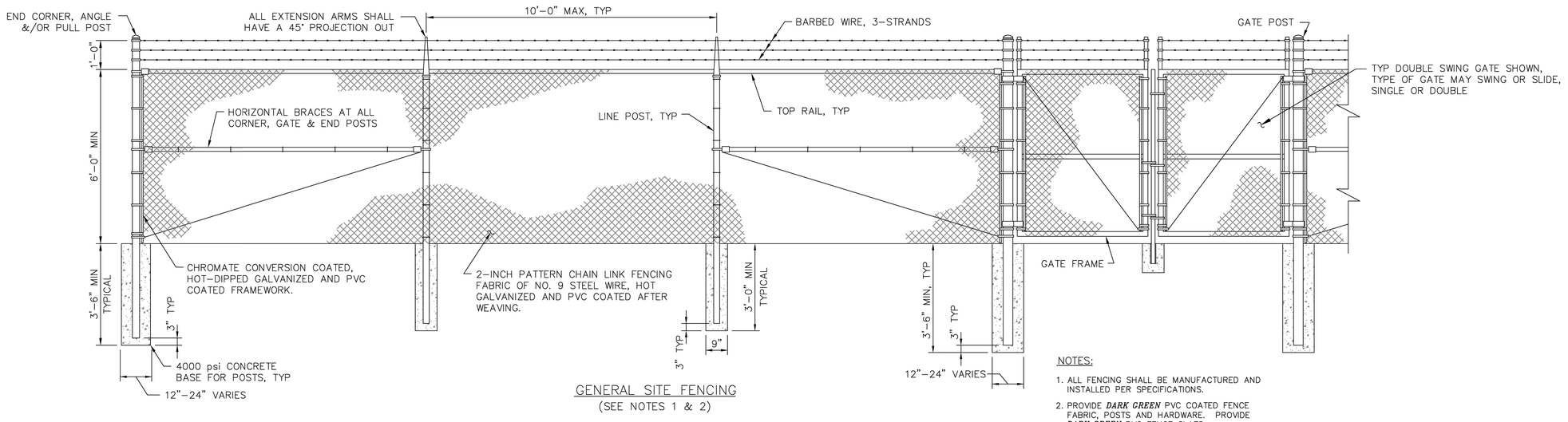
TYPICAL 4"x12" CONCRETE ROLLOVER CURB DETAIL

NOT TO SCALE



ISOLATION JOINT DETAIL

NOT TO SCALE



GENERAL SITE FENCING
(SEE NOTES 1 & 2)

NOTES:

1. ALL FENCING SHALL BE MANUFACTURED AND INSTALLED PER SPECIFICATIONS.
2. PROVIDE ***DARK GREEN*** PVC COATED FENCE FABRIC, POSTS AND HARDWARE. PROVIDE ***DARK GREEN*** PVC FENCE SLATS.

DETAIL 17 / Z0C08

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
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SCOTT STREET No. 1
LIFT STATION REHABILITATION

CIVIL DETAILS
SHEET 5 OF 6

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

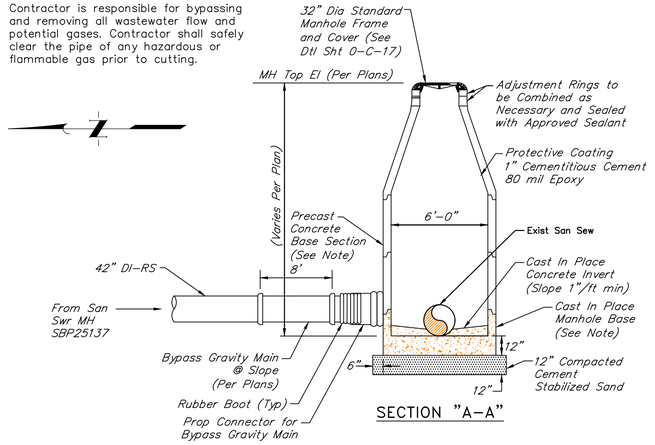
CATEGORY NO. 0-C-29 SHEET NO. 28 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

NOTES:

1. Contractor to manufacture portion of precast manhole walls to accommodate existing San Sew line. Pour base under existing line and place pre-cast manhole into the wet cement. Fill in around existing line with grout.
2. Contractor to cut through exist San Sew line to accommodate doghouse man hole and allow flow to pass through.
3. Contractor is responsible for bypassing and removing all wastewater flow and potential gases. Contractor shall safely clear the pipe of any hazardous or flammable gas prior to cutting.

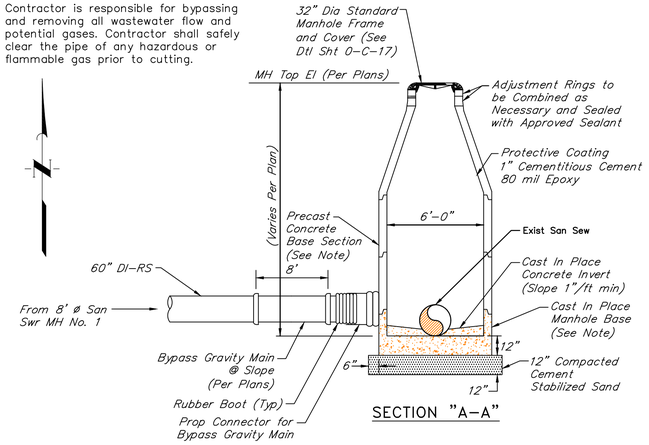


DOGHOUSE MANHOLE No. 1 DETAIL

NOT TO SCALE

NOTES:

1. Contractor to manufacture portion of precast manhole walls to accommodate existing San Sew line. Pour base under existing line and place pre-cast manhole into the wet cement. Fill in around existing line with grout.
2. Contractor to cut through exist San Sew line to accommodate doghouse man hole and allow flow to pass through.
3. Contractor is responsible for bypassing and removing all wastewater flow and potential gases. Contractor shall safely clear the pipe of any hazardous or flammable gas prior to cutting.

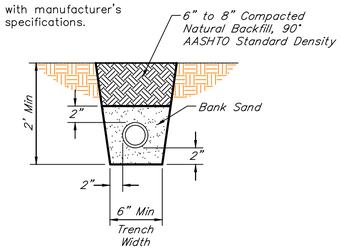


DOGHOUSE MANHOLE No. 1 DETAIL

NOT TO SCALE

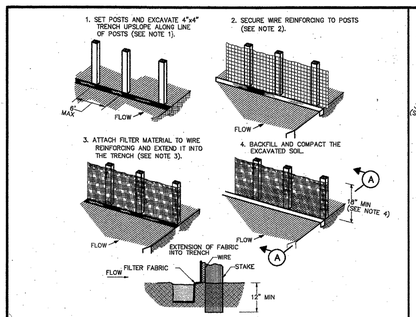
NOTE:

All PVC piping to be installed in accordance with manufacturer's specifications.



1526 - BEDDING FOR SMALL DIAMETER (<3") PIPING DETAIL

NOT TO SCALE

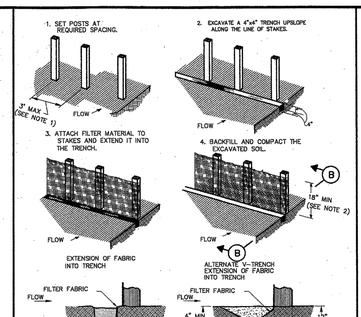


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

REINFORCED FILTER FABRIC BARRIER

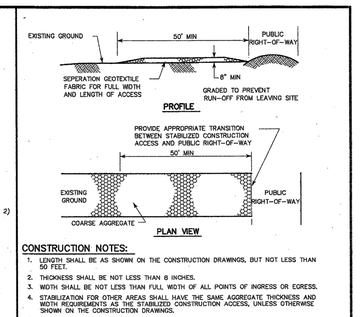


CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

FILTER FABRIC BARRIER

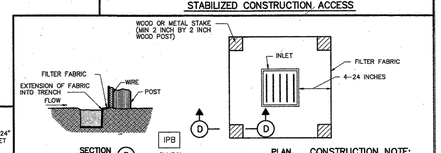


CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SC SYMBOL

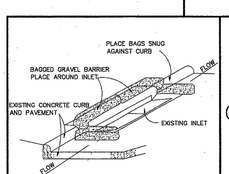
STABILIZED CONSTRUCTION ACCESS

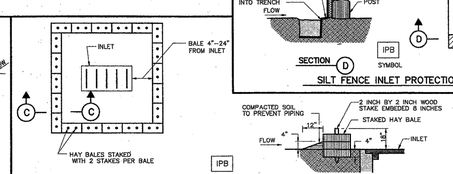


SILT FENCE INLET PROTECTION BARRIER

CONSTRUCTION NOTE:

1. SEE CONSTRUCTION NOTES FOR RFB.





HAY BALE INLET PROTECTION BARRIER

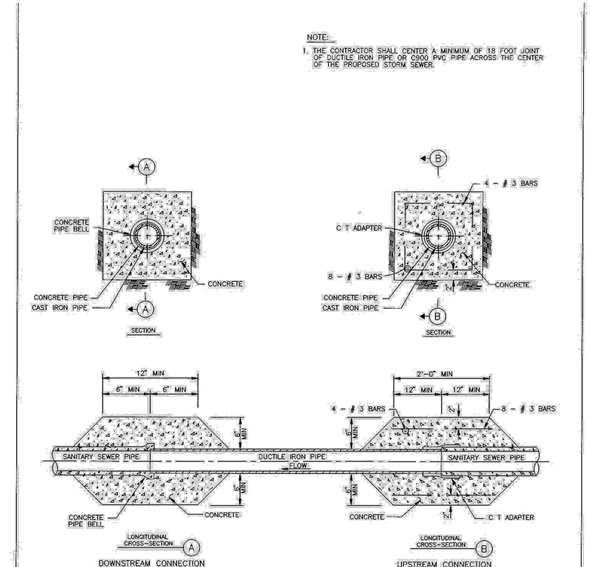
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

APPROVED BY CITY ENGINEER | APPROVED BY DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 01571-01

NOTE:
1. THE CONTRACTOR SHALL CENTER A MINIMUM OF 18 FOOT JOINT OF DUCTILE IRON PIPE, OR C900 PVC PIPE ACROSS THE CENTER OF THE PROPOSED STORM SEWER.



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
DUCTILE IRON PIPE
STORM SEWER CROSSING
(NOT TO SCALE)

APPROVED BY CITY ENGINEER | APPROVED BY DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02531-03

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

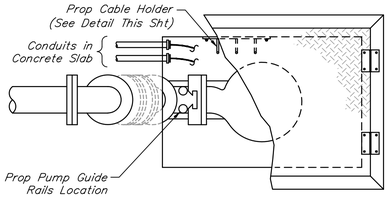
CIVIL DETAILS
SHEET 6 OF 6

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

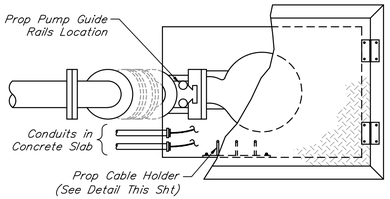
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 0-C-30 SHEET NO. 29 OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\MISCD-2.dwg, Jul 09, 2025 - 11:08am, sa2

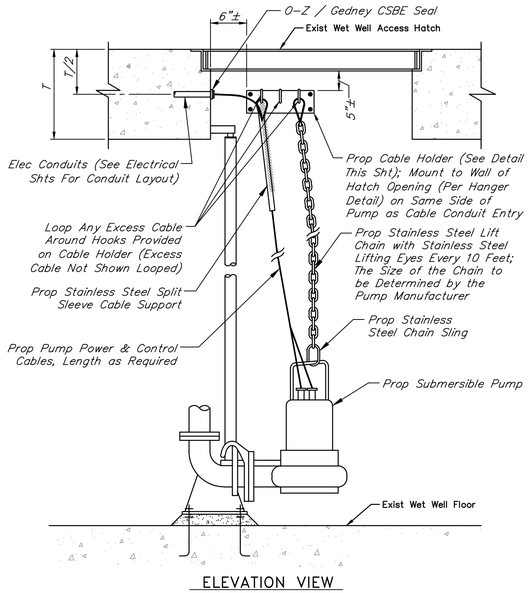
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



PLAN VIEW ~ LEFT ORIENTATION



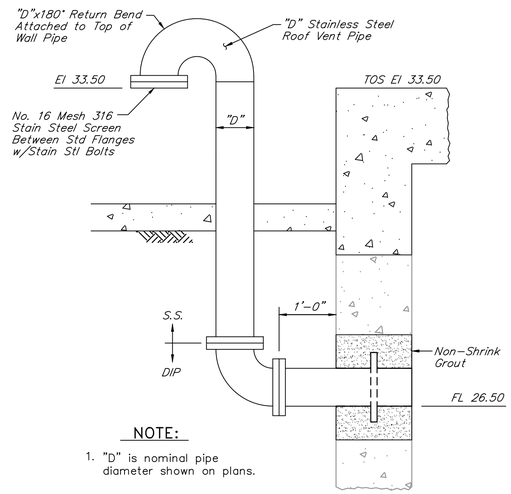
PLAN VIEW ~ RIGHT ORIENTATION



ELEVATION VIEW

TYPICAL PUMP LIFTING AND CABLING FOR NEW PUMP AND PIPING IN EXISTING WET WELL DETAIL

NOT TO SCALE

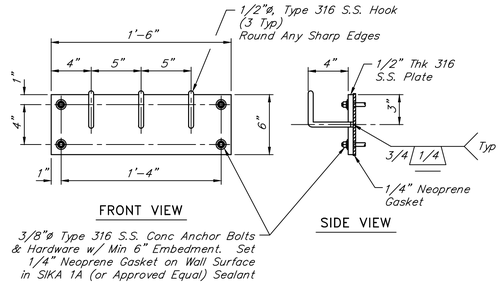


NOTE:

1. "D" is nominal pipe diameter shown on plans.

WET WELL VENT DETAIL

NOT TO SCALE

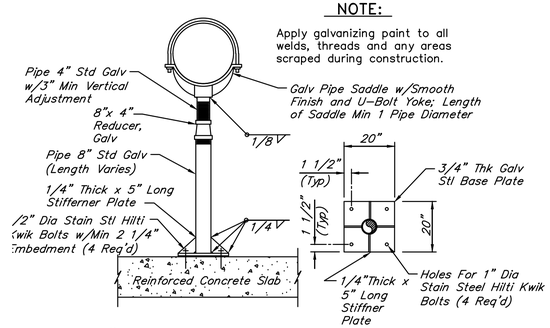


TYPICAL CABLE HOLDER ASSEMBLY DETAIL

NOT TO SCALE

NOTE:

Apply galvanizing paint to all welds, threads and any areas scraped during construction.

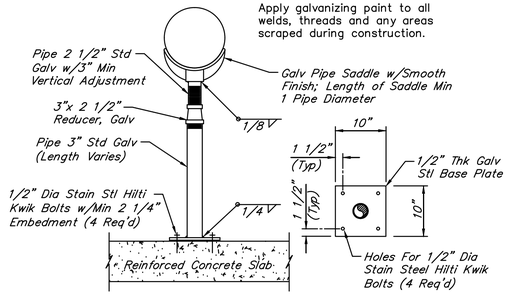


8" ADJUSTABLE STEEL PIPE SUPPORT WITH U-BOLT YOKE AND 20" BASE

NOT TO SCALE

NOTE:

Apply galvanizing paint to all welds, threads and any areas scraped during construction.

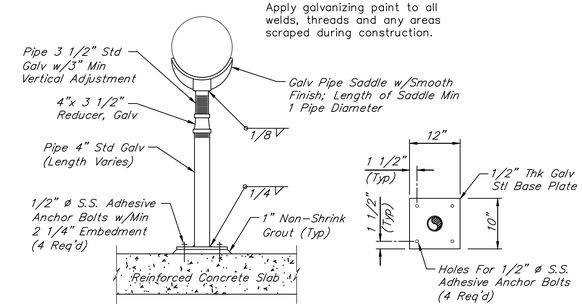


3" ADJUSTABLE STEEL PIPE SUPPORT

NOT TO SCALE

NOTE:

Apply galvanizing paint to all welds, threads and any areas scraped during construction.



ADJUSTABLE STEEL PIPE SUPPORT

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

LIFT STATION
MECHANICAL DETAILS
SHEET 1 OF 2

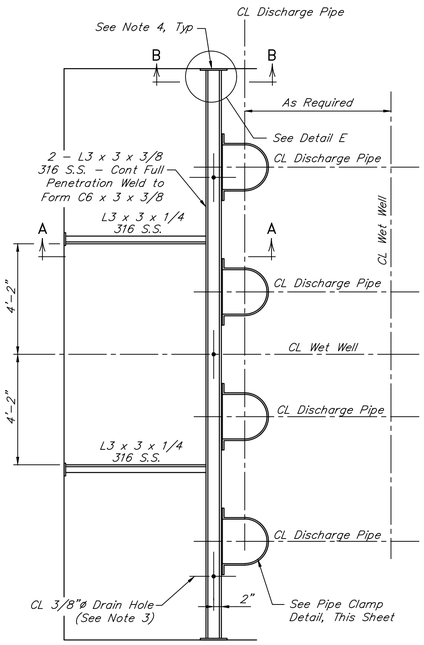
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX

CATEGORY NO. 0-M-1 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

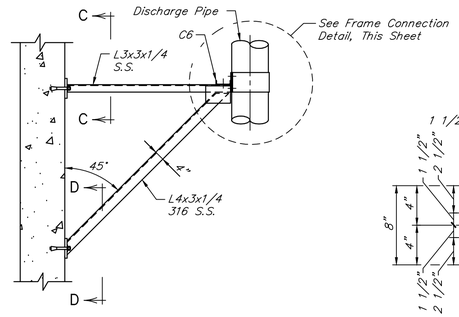
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



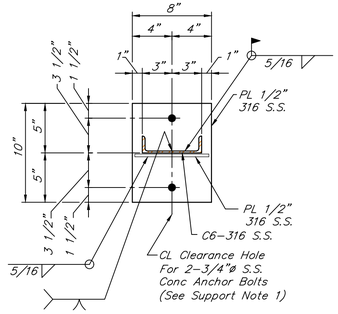
PLAN VIEW

TYPICAL DISCHARGE PIPING SUPPORT DETAIL FOR 4 PUMPS

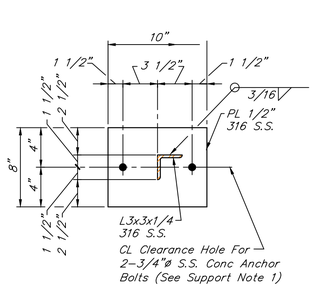
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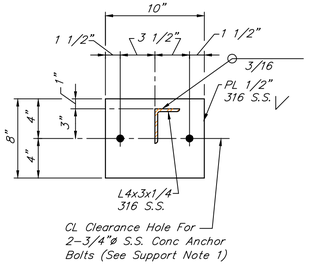
SECTION "A–A"



SECTION "B–B"



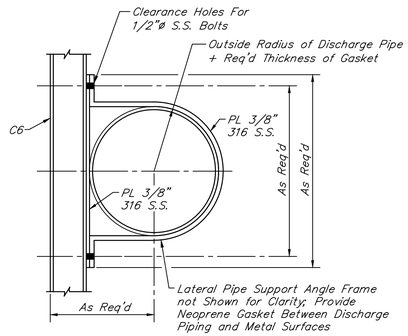
SECTION "C–C"



SECTION "D–D"

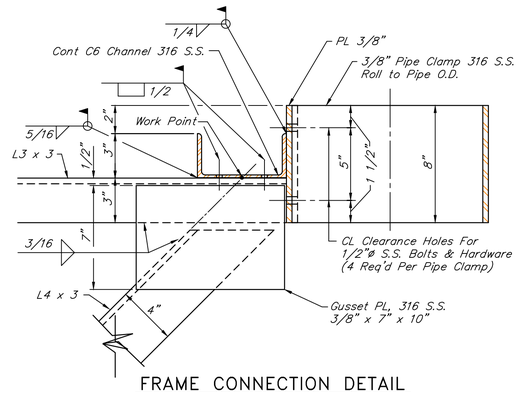
NOTES:

1. Concrete anchor bolts shall have 6" minimum embedment and shall be type 316 stainless steel.
2. See station and structural drawings for dimensions and information not shown.
3. Drill 3/8" holes 1" off CL of C6 at midspan between lateral pipe supports to allow for drainage. Three (3) holes per channel where two (2) lateral supports required; Two (2) holes per channel where one (1) lateral support required.
4. Set 1/4" neoprene gasket on wall surface in Sika 1A (or equal) sealant.



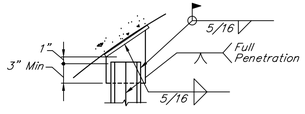
PIPE CLAMP DETAIL

NOT TO SCALE

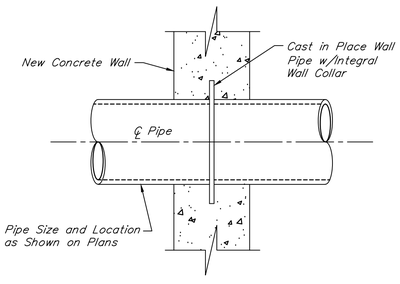


FRAME CONNECTION DETAIL

NOT TO SCALE

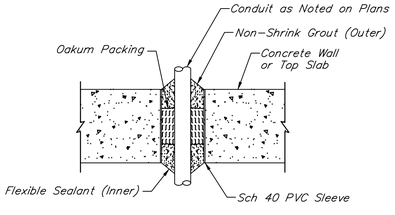


DETAIL E



PIPE PENETRATION DETAIL

NOT TO SCALE

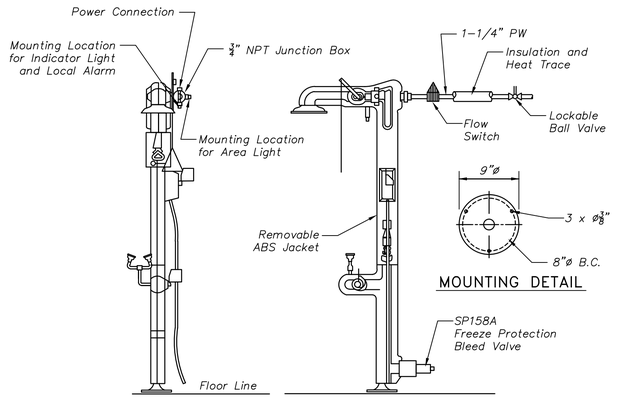


NOTE:

Sleeved wet well penetration is not to be used for conduit installation. See electrical detail sheets for conduit penetrations.

SLEEVED WET WELL PENETRATION DETAIL

NOT TO SCALE



MOUNTING DETAIL

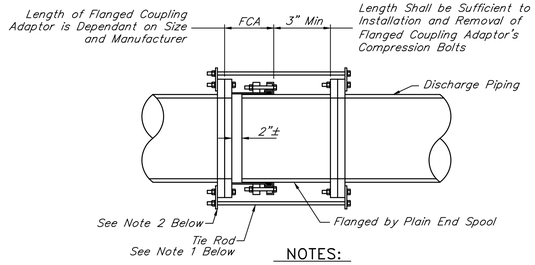
NOTE:

1. At the Contractor's option and depending on location of water supply location, the water supply can be connected at either manufacturer provided supply connection, top or bottom.

IMPORTANT:
POTABLE WATER SUPPLY
MUST BE HEAT TRACED
AND INSULATED

EMERGENCY SHOWER/EYEWASH DETAIL

NOT TO SCALE



NOTES:

1. Provide a number of tie rods equal to 1/2 the number of flange bolts. Evenly space installation of tie rods. Diameter of tie rods to be equal to the diameter of flange bolts. Length of tie rods to be determined by Contractor based on size and manufacturer of flanged coupling adaptor and final length of spool piece.
2. Provide 316 S.S. tab for attachment of tie rods. Size to be determined by Contractor.
3. Contractor to submit details during shop drawing submission.
4. All hardware shall be 316 stainless steel. Tie rods should be threaded.
5. This restraint does not replace thrust blocks to be provided at other locations.

TYP FLANGED COUPLING ADAPTOR RESTRAINT DETAIL

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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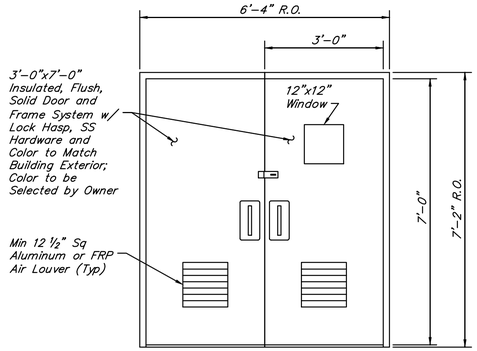
SCOTT STREET No. 1
LIFT STATION REHABILITATION

LIFT STATION
MECHANICAL DETAILS
SHEET 2 OF 2

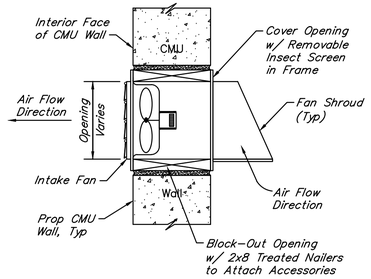
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

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FOR CITY OF HOUSTON USE ONLY

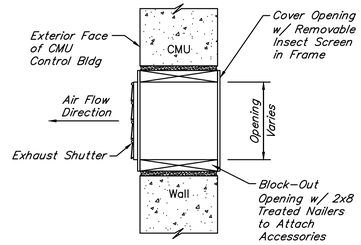
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



TYPICAL DUAL DOOR DETAIL
NOT TO SCALE



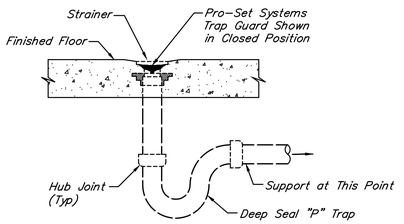
INTAKE/SUPPLY FAN DETAIL
NOT TO SCALE



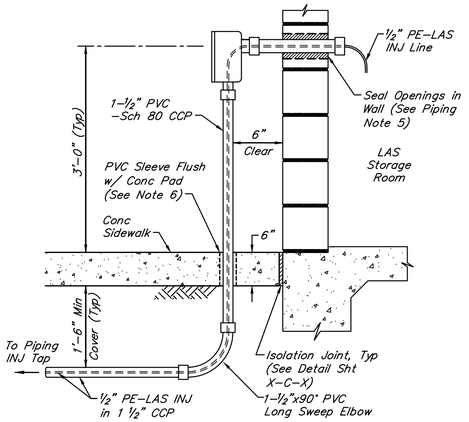
EXHAUST SHUTTER DETAIL
NOT TO SCALE

NOTES:

1. Trap guard shall be factory fitted to match each floor drain (and floor sink) by size, model, and manufacturer.
2. Floor sink trap guard installation is similar.
3. Installation of trap guard to be in accordance with manufacturer's recommendations.
4. Insert trap guard only after final rodding of drains. Install trap guard with clear silicone caulk for gas tite seal. For drain rodding after installation, insert sewer tape through lightly greased 1–½" PVC pipe to protect trap guard.



FLOOR DRAIN WITH TRAP SEAL DETAIL
NOT TO SCALE



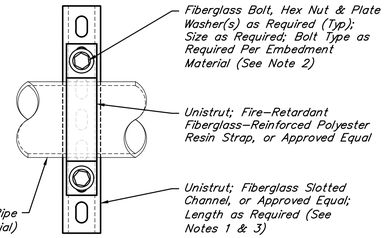
LAS INJ LINE WALL PENETRATION DETAIL
NOT TO SCALE

PIPING NOTES:

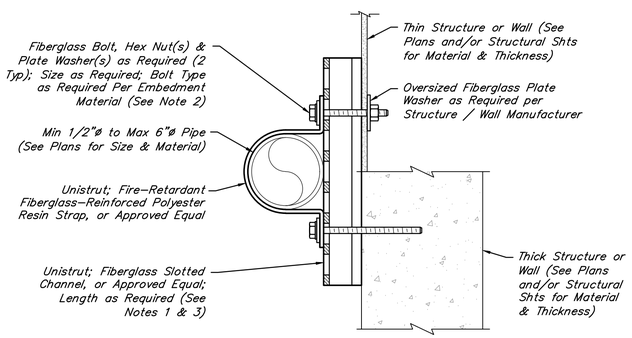
1. Contractor shall construct all PE solution lines encased in Sch 80 PVC conduit and use only long sweep elbows and bends to allow tubing to be easily repaired and/or replaced in the future.
2. All chemical injection lines and taps shall be constructed as per the referenced detail drawings unless approved otherwise by the Engineer prior to making any changes.
3. The aboveground eye wash/shower safety station and water supply line shall be secured to the sidewalk and adjacent CMU wall with approved SS struts and Type 316 SS hardware as required.
4. All PVC piping shall be installed in accordance with the piping manufacturer's specifications.
5. All wall penetrations through CMU building walls shall be tightly sealed with an approved chemical resistant non-shrink grout.
6. All PVC sleeves shall be sized to minimize the void between the main pipe and the sleeve to a maximum 1/4-inch (1/4") gap.

NOTES:

1. Light Duty Unistruts shall be used for 1/2" through 3" pipes. Heavy Duty Unistruts shall be used for 4" and 6" pipes.
2. Fiberglass bolts and nuts shall by tightened by hand ONLY.
3. For multiple pipes, extend length of fiberglass support channel as needed. Provide a minimum of clearance of 6" between pipes.

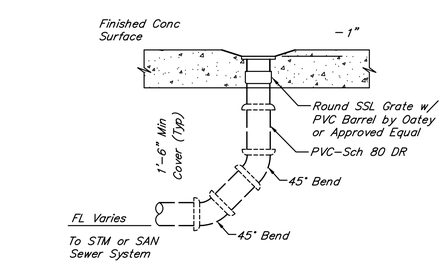


END VIEW

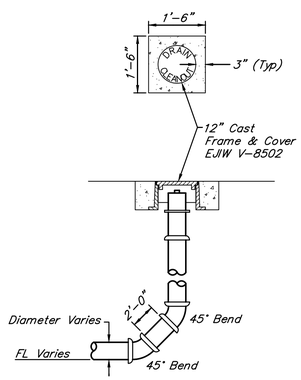


SECTION VIEW

2133 – UNISTRUT WALL SUPPORT DETAIL FOR CHEMICAL PIPING 1/2" THROUGH 6" DIAMETER
NOT TO SCALE



TYPICAL DRAIN GRATE DETAIL
NOT TO SCALE



CLEANOUT DETAIL
NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JUNE 2025

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

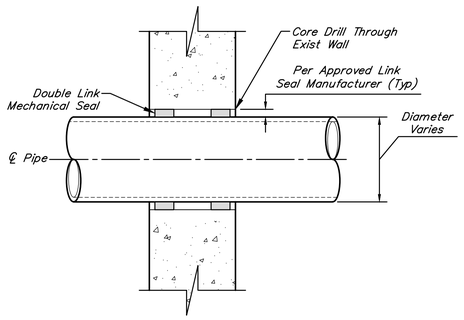
MECHANICAL DETAILS
SHEET 3 OF 5

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

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CATEGORY NO. O-M-3 SHEET NO. XXX OF XXX
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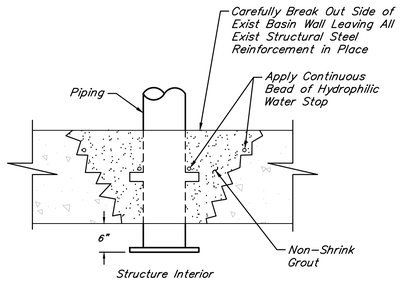
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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



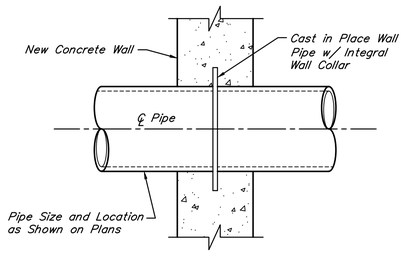
EXIST CONC CORE DRILL PIPE PENETRATION DETAIL

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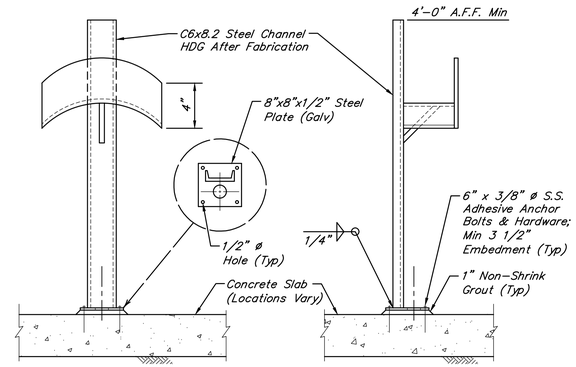
PIPE PENETRATION FOR EXISTING CONCRETE WALL DETAIL

NOT TO SCALE



PIPE PENETRATION FOR PROPOSED CONCRETE WALL DETAIL

NOT TO SCALE

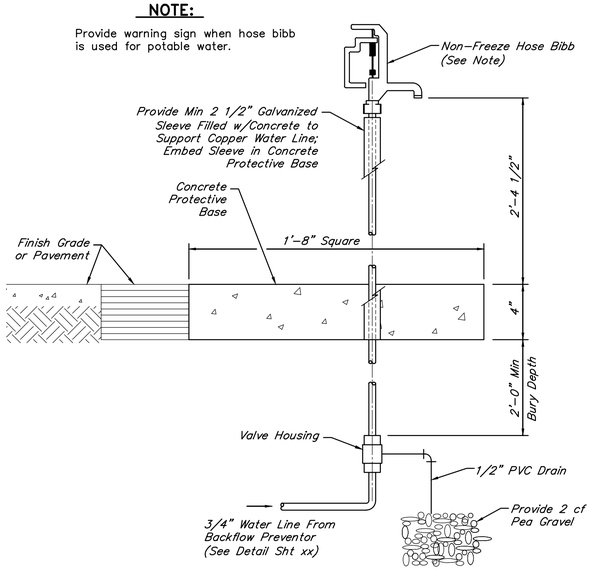


HOSE RACK DETAIL – SLAB-MOUNTED

NOT TO SCALE

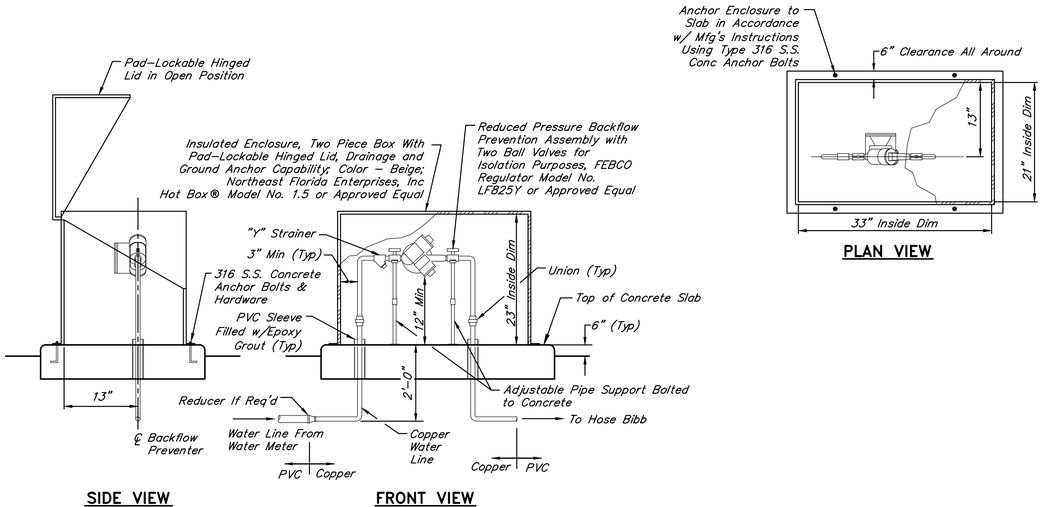
NOTE:

Provide warning sign when hose bibb is used for potable water.



TYP NON-FREEZE HOSE BIBB DETAIL

NOT TO SCALE



1570 – REDUCED PRESSURE ZONE BACKFLOW PREVENTER INSTALLATION DETAIL

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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P.E. Serial No.: 144401

Date: JUNE 2025

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MECHANICAL DETAILS
SHEET 4 OF 5

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

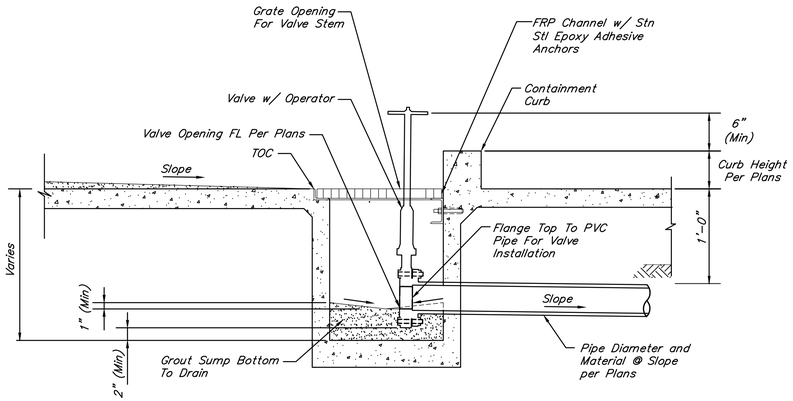
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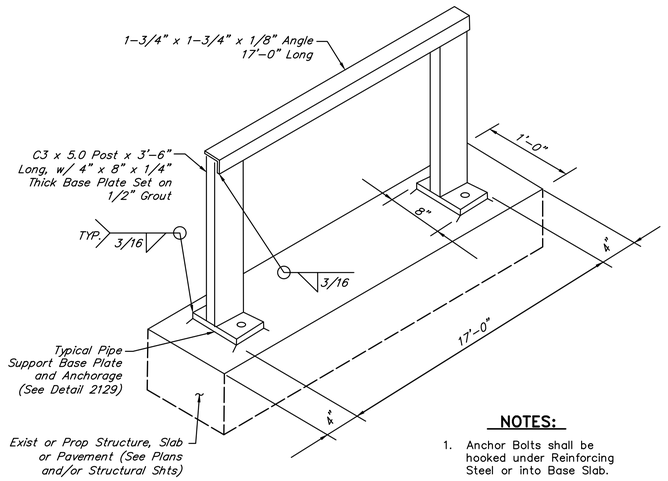
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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



2616 – CHEMICAL CONTAINMENT AREA SUMP DETAIL

NOT TO SCALE

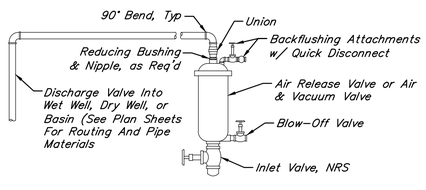


NOTES:

1. Anchor Bolts shall be hooked under Reinforcing Steel or into Base Slab.

2620 – TANK FILL PIPE SUPPORT DETAIL

NOT TO SCALE

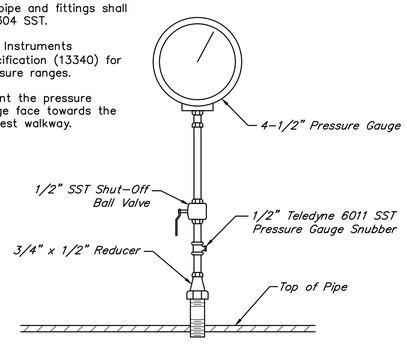


TYPICAL AIR RELEASE/ AIR & VACCUM VALVE ASSEMBLY

NOT TO SCALE

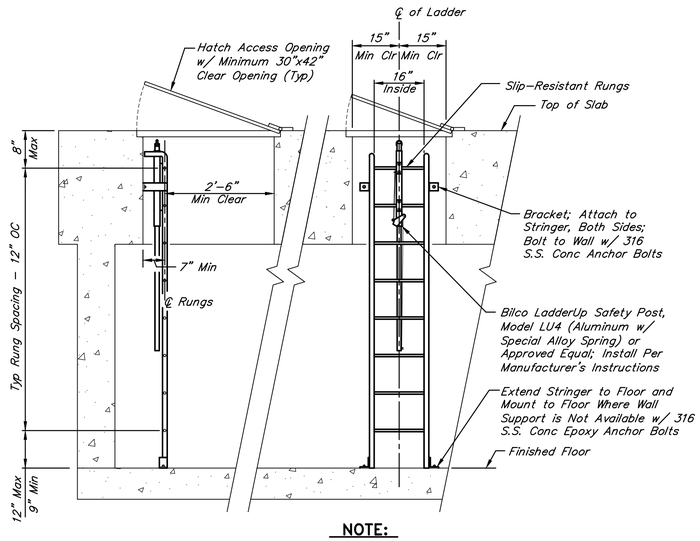
PRESSURE GAUGE NOTES:

1. All pipe and fittings shall be 304 SST.
2. See Instruments Specification (13340) for pressure ranges.
3. Orient the pressure gauge face towards the nearest walkway.



PRESSURE GAUGE DETAIL

NOT TO SCALE



NOTE:

Contractor to provide detail drawings of ladder during shop drawing submission.

TYPICAL ENTRY ACCESS LADDER INSTALLATION DETAIL

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

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P.E. Serial No.: 144401

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SHEET 5 OF 5

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CATEGORY NO. O-M-5 SHEET NO. XXX OF XXX

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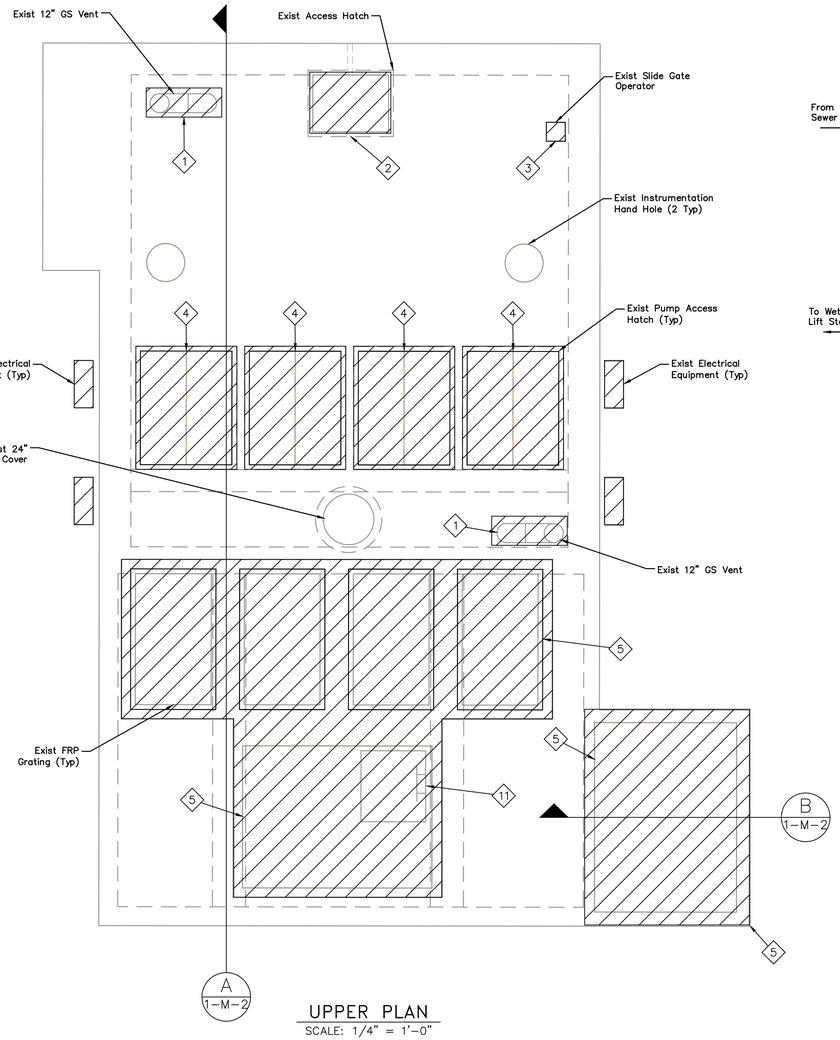
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

ITEMS OF WORK

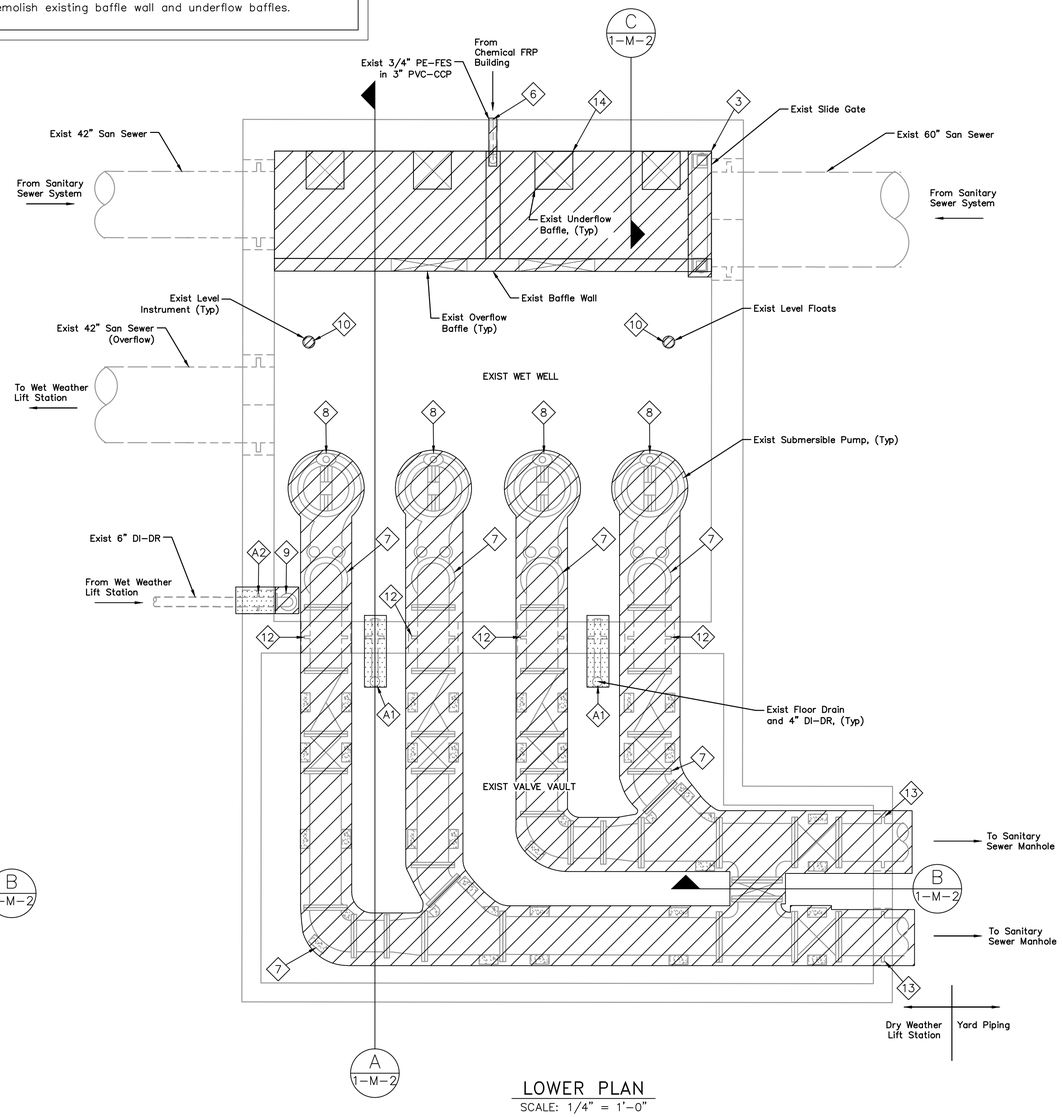
No.	DESCRIPTION	No.	DESCRIPTION
1	Chip out and demolish existing 12" GS vents.	8	Demolish existing submersible pumps, base elbows, lifting chain, guiderails, and power cables.
2	Chip out and demolish existing 4'–0" x 3'–0" access hatch.	9	Demolish existing 6" DI – DR up to flange at wall pipe penetration.
3	Demolish existing slide gate operator and slide gate.	10	Demolish existing level instruments and floats.
4	Demolish existing pump access hatch.	11	Demolish existing valve vault access ladder.
5	Demolish existing FRP grating, grating framing, embeds, and concrete curb.	12	Chip out and demolish existing 20" riser piping wall collars.
6	Chip out and demolish existing 3/4" FES in 3" PVC pipe	13	Chip out and demolish existing 24" force main piping wall collars.
7	Demolish existing riser and header piping, valves, fittings, and pipe supports in the wet well and valve vault.	14	Demolish existing baffle wall and underflow baffles.

ITEMS OF WORK (ALTERNATE BID ITEMS)

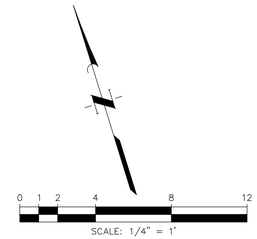
No.	DESCRIPTION
A1	Chip out and demolish existing 4" drain line piping wall collars. (Alternate Bid Item No. 1)
A2	Chip out and demolish existing 6" drain line piping wall collars. (Alternate Bid Item No. 2)



UPPER PLAN
SCALE: 1/4" = 1'–0"



LOWER PLAN
SCALE: 1/4" = 1'–0"



LEGEND:

DEMOLISH

DEMOLISH (Alternate Bid Item)

NOTES:

1. All existing structures, dimensions, locations, and materials shown are based on City of Houston's record drawings. Contractor shall field verify existing dimensions, locations, and materials as required to complete the work and as directed by the Engineer. Field verification shall be incidental to the work.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050–0099–01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATHER PUMP STATION DEMOLITION PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'–0" HORIZ: XXX VERT: XXX

CATEGORY NO. 1–M–1 SHEET NO. 32 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

ITEMS OF WORK

No.	DESCRIPTION	No.	DESCRIPTION
1	Demolish existing 12" GS vents.	7	Demolish existing pump shelf.
2	Demolish existing pump access hatch.	8	Demolish existing level instruments and floats.
3	Demolish existing FRP grating, grating framing, embeds, and concrete curb.	9	Demolish eixsting 24" force main piping, valves, fittings, instruments and pipe supports.
4	Demolish existing 20" riser piping, valves, fittings, and pipe supports.	10	Demolish existing baffle wall.
5	Demolish existing 6" DI – DR up to flange at wall pipe penetration.	11	Demolish existing grouting.
6	Demolish existing submersible pumps, base elbows, lifting chain, guiderails, and power cables.	12	Demolish existing slide gate frame and extended intermediate stem.

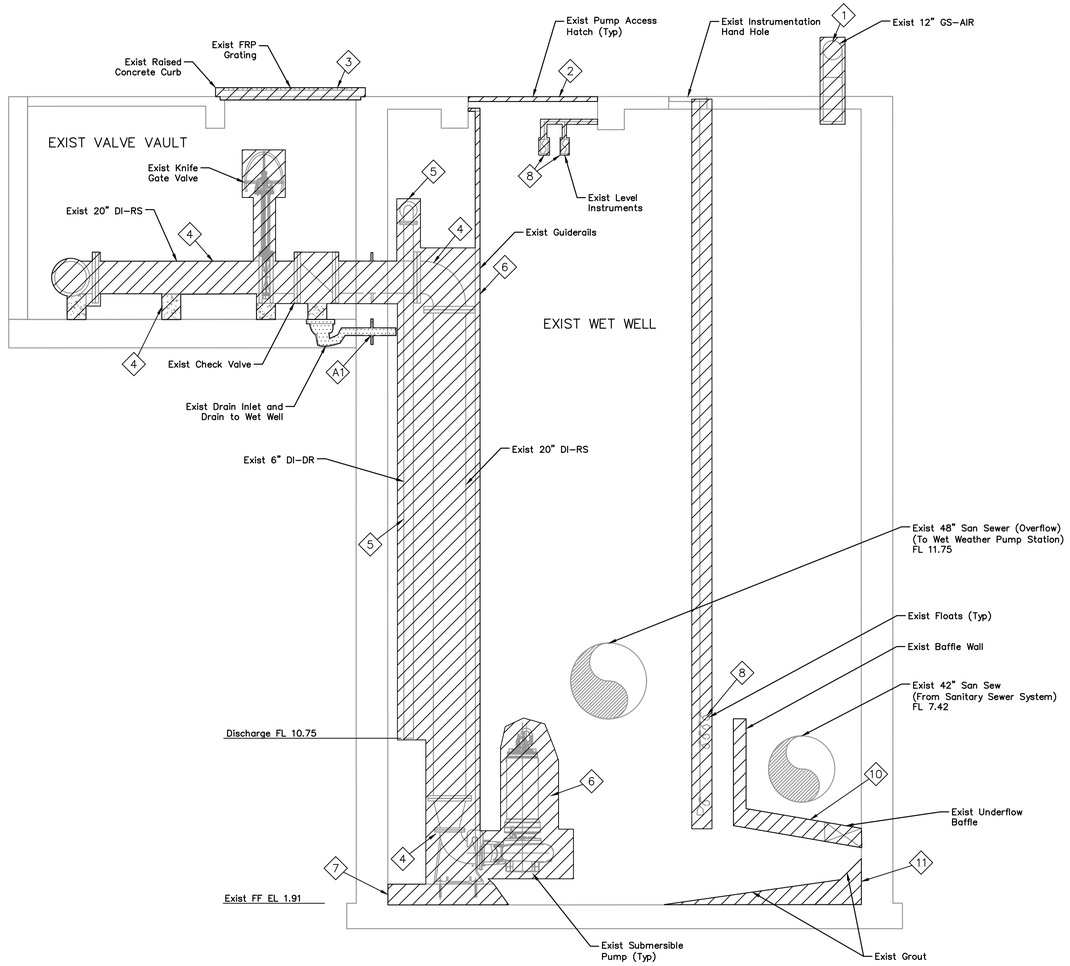
ITEMS OF WORK (ALTERNATE BID ITEMS)

No.	DESCRIPTION
A1	Chip out and demolish existing 4" drain line piping and wall collars. (Alternate Bid Item No. 1)

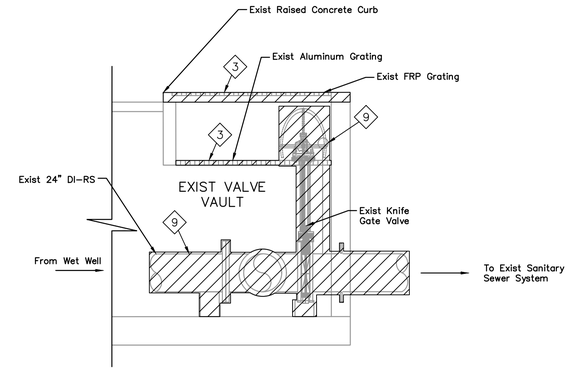
LEGEND:

DEMOLISH

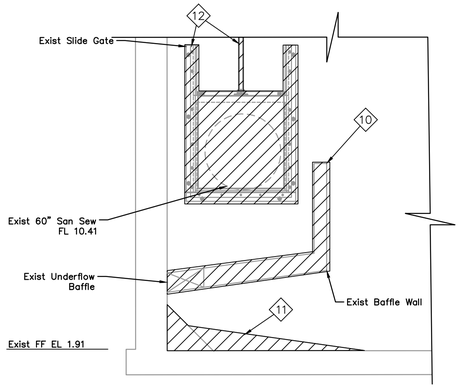
DEMOLISH (Alternate Bid Item)



SECTION A–A
SCALE: 1/4" = 1'–0"



SECTION B–B
SCALE: 1/4" = 1'–0"



SECTION C–C
SCALE: 1/4" = 1'–0"

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY:
JOB NO: 00050–0099–01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATHER PUMP STATION
DEMOLITION SECTION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'–0" HORIZ: XXX VERT: XXX

CATEGORY NO. 1–M–2 SHEET NO. 33 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

VALVES, FITTINGS AND ACCESSORIES SCHEDULE

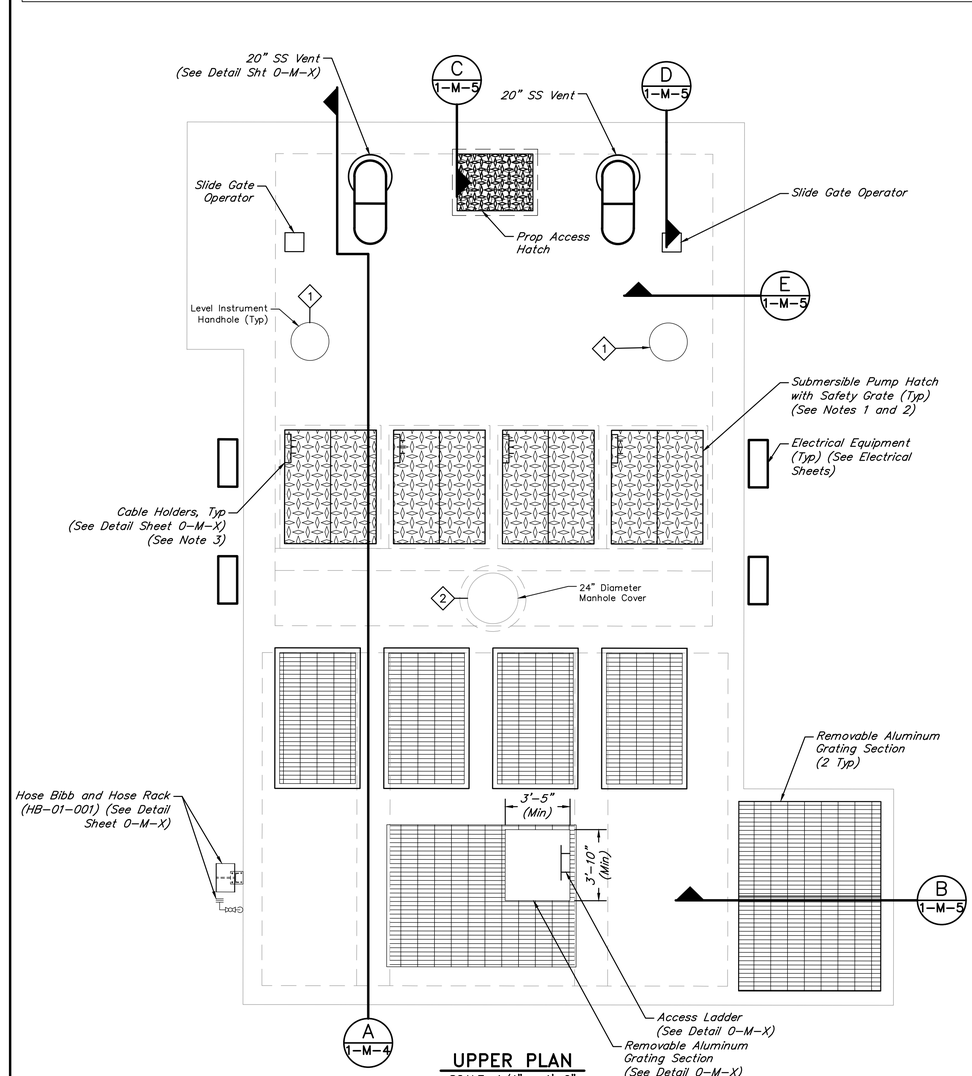
No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	24" x 24" x 20" Tee, FJ	11	20" x 20" x 20" Tee, FJ	21	20" Dismantling Joint (DJ-01-301)	31	3" Air & Vacuum Valve (AVV-01-201) and 3" Ball Valve (BV-01-201)
2	24" Dismantling Joint (DJ-01-001)	12	20" 45° Bend, FJ	22	20" Swing Check Valve (SCV-01-401)	32	1/2" Pressure Indicator (PI-01-301) and 1/2" Ball Valve (BV-01-302)
3	24" Knife Gate Valve (KGV-01-001)	13	20" Swing Check Valve (SCV-01-101)	23	20" Knife Gate Valve (KGV-01-401)	33	3" Air & Vacuum Valve (AVV-01-301) and 3" Ball Valve (BV-01-301)
4	24" Dismantling Joint (DJ-01-003)	14	20" Knife Gate Valve (KGV-01-101)	24	20" Dismantling Joint (DJ-01-401)	34	1/2" Pressure Indicator (PI-01-401) and 1/2" Ball Valve (BV-01-402)
5	24" Knife Gate Valve (KGV-01-002)	15	20" Dismantling Joint (DJ-01-101)	25	6" 90° Bend, FJ	35	3" Air & Vacuum Valve (AVV-01-401) and 3" Ball Valve (BV-01-401)
6	24" Dismantling Joint (DJ-01-002)	16	20" Swing Check Valve (SCV-01-201)	26	4" Duckbill Check Valve (DBV-01-001)	36	3" Air Release Valve (ARV-01-001) and 3" Ball Valve (BV-01-001)
7	24" Knife Gate Valve (KGV-01-003)	17	20" Knife Gate Valve (KGV-01-201)	27	4" Duckbill Valve (DBV-01-002)	37	Pressure Indicator Transmitter (PIT-01-001) and 1/2" Ball Valve (BV-01-001)
8	24" x 20" Concentric Reducer, FJ	18	20" Dismantling Joint (DJ-01-201)	28	1/2" Pressure Indicator (PI-01-101) and 1/2" Ball Valve (BV-01-102)	38	3" Air Release Valve (ARV-01-002) and 3" Ball Valve (BV-01-003)
9	24" x 24" x 20" Lateral Wye, FJ	19	20" Swing Check Valve (SCV-01-301)	29	3" Air & Vacuum Valve (AVV-01-101) and 3" Ball Valve (BV-01-101)	39	Pressure Indicator Transmitter (PIT-01-002) and 1/2" Ball Valve (BV-01-004)
10	20" 90° Bend, FJ	20	20" Knife Gate Valve (KGV-01-301)	30	1/2" Pressure Indicator (PI-01-201) and 1/2" Ball Valve (BV-01-202)	40	24"x24"x24" Tee, FJ

ITEMS OF WORK (ALTERNATE BID ITEMS)

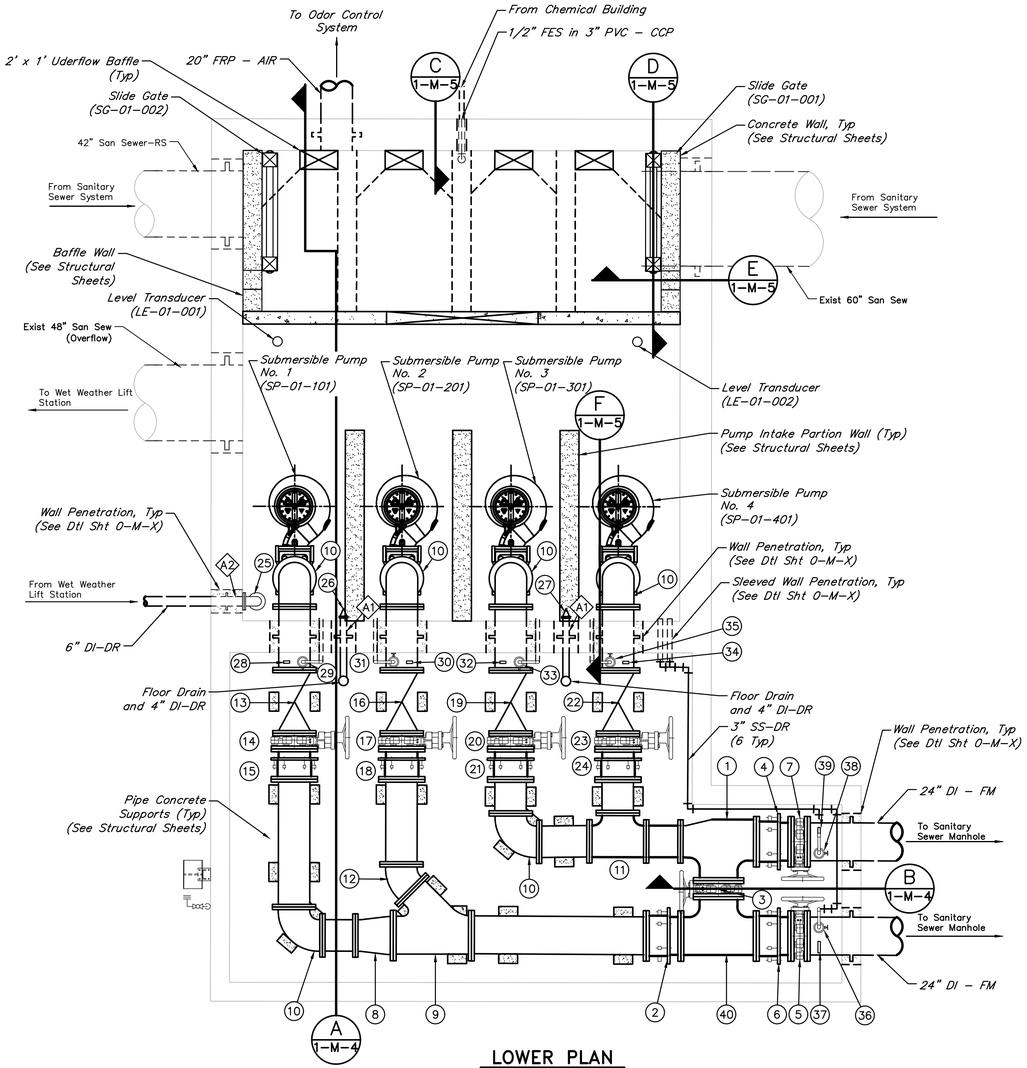
No.	DESCRIPTION
A1	Chip out and demolish existing 4" drain line piping wall collars. (Alternate Bid Item No. 1)
A2	Chip out and demolish existing 6" drain line piping wall collars. (Alternate Bid Item No. 2)

ITEMS OF WORK

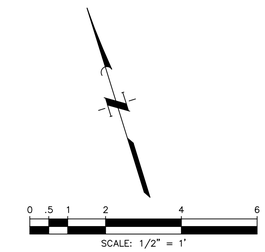
No.	DESCRIPTION
1	Hand clean and apply a cold galvanizing spray on the instrument handhole cover.
2	Hand clean and apply a cold galvanizing spray on the manhole cover.



UPPER PLAN
SCALE: 1/4" = 1'-0"



LOWER PLAN
SCALE: 1/4" = 1'-0"



NOTES:

1. The access hatch requires a rigid safety grate fall prevention system with less than three inch (3") openings between the grate and any edge of the hatch opening.
2. Contractor shall verify the minimum required pump access hatch size with the Pump Manufacturer. The minimum size is shown.
3. Contractor to field locate the location of existing cable holders so as to confirm unimpeded installation of pumps and safety grating.
4. Contractor shall apply protective coating to all proposed above ground and below ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATHER PUMP SECTION IMPROVEMENT PLAN

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

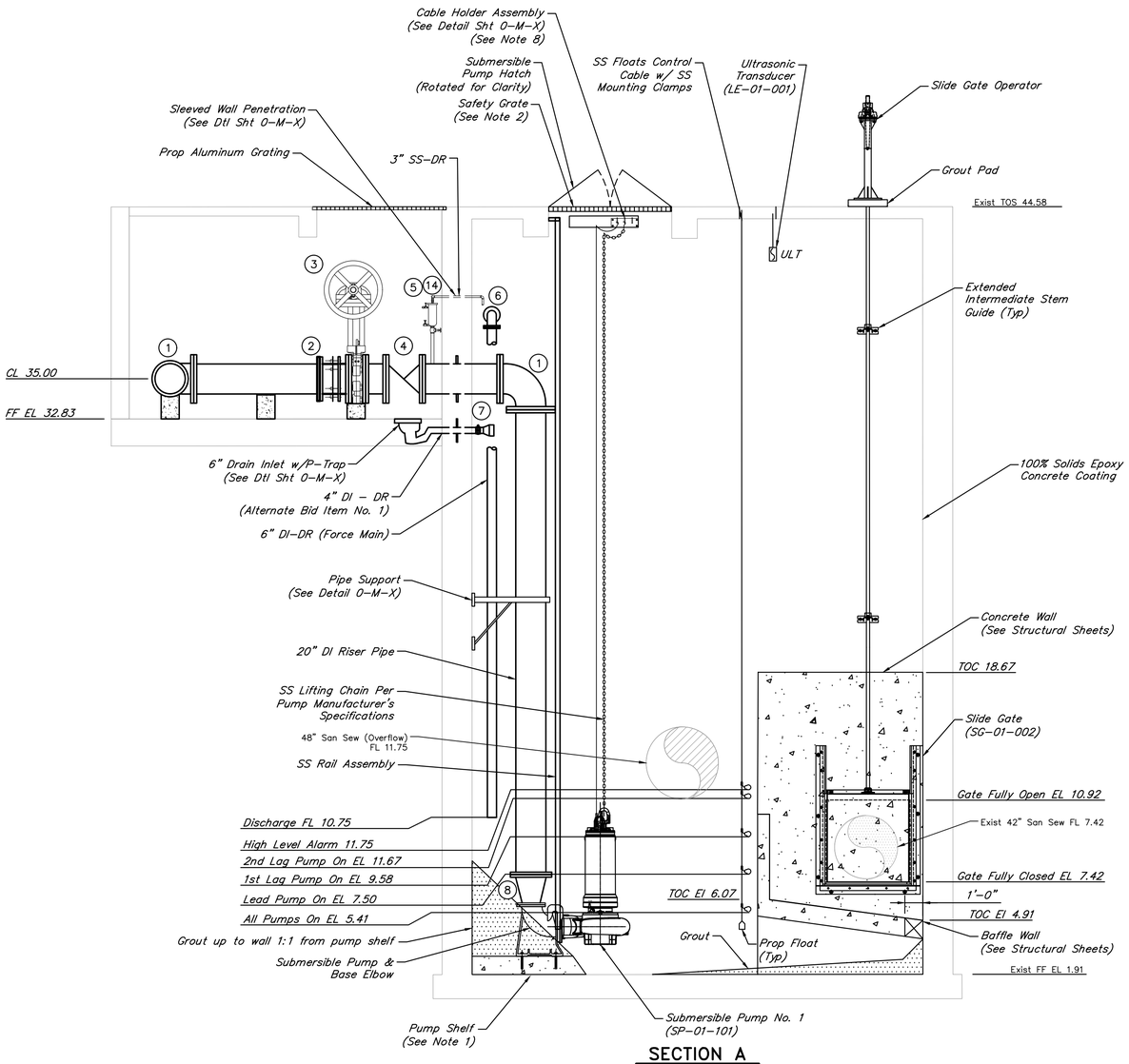
DRAWING SCALE 1/4"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. 1-M-3 SHEET NO. 34 OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\MECH.dwg, Jul 08, 2025 - 2:38pm, so2

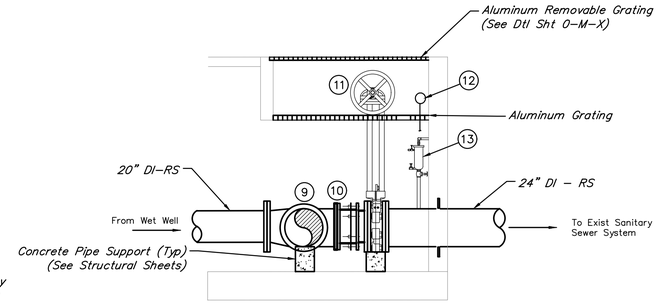
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

VALVES, FITTINGS AND ACCESSORIES SCHEDULE

No.	DESCRIPTION	No.	DESCRIPTION
1	20" 90° Bend, FJ	8	20" Concentric Reducer, FJ (See Note 6)
2	20" Dismantling Joint (DJ-01-101)	9	24" x 24" x 20" Tee, FJ
3	20" Knife Gate Valve (KGV-01-101)	10	24" Dismantling Joint (DJ-01-003)
4	20" Swing Check Valve (SCV-01-101)	11	24" Knife Gate Valve (KGV-01-003)
5	3" Air & Vacuum Valve (AVV-01-101) and 3" Ball Valve (BV-01-101)	12	1/2" Ball Valve (BV-01-004) and Pressure Indicator Transmitter (PIT-01-002)
6	6" 90° Bend, FJ	13	3" Air Release Valve (ARV-01-002) and 3" Ball Valve (BV-01-003)
7	4" Duckbill Check Valve (DBV-01-001)	14	Pressure Indicator (PI-01-101) and 1/2" Ball Valve (BV-01-102)



SECTION A
SCALE: 1/4" = 1'-0"



SECTION B
SCALE: 1/4" = 1'-0"

LIFT STATION OPERATION TABLE

RISING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
7.50	LEAD PUMP TURNS ON	LEAD PUMP TURNS ON
9.58	1st LAG PUMP TURNS ON	LEAD AND 1st LAG PUMP TURNS ON
11.67	2nd LAG PUMP TURNS ON	LEAD AND TWO LAG PUMPS TURNS ON
11.75	HIGH LEVEL ALARM	LEAD AND TWO LAG PUMPS RUNNING
FALLING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
7.50	HIGH LEVEL ALARM TURNS OFF	LEAD AND TWO LAG PUMPS ON
5.00	ALL PUMPS TURN OFF	NONE

NOTES:

1. Pump shelf shall be required as per pump manufacturer.
2. The access hatch requires a rigid safety grate fall prevention system with less than three inch (3") openings between the grate and any edge of the hatch opening.
3. Contractor shall verify the minimum required pump access hatch size with the Pump manufacturer. The minimum size is shown.
4. Provide a PVC coated weight at the end of the stainless steel float controls cable.
5. Contractor shall coordinate with supplied Pump Manufacturer to ensure grout in wet well is outside the minimum required clearance area for the pumps.
6. Coordinate reducer with approved pump manufacturer submittal and base elbows.
7. Contractor shall field verify horizontal and vertical location of exist 42" and 60" wall penetrations and submit field findings for review by Engineer prior to submittal and fabrication of proposed gates.
8. Contractor shall field locate the location of the proposed cable holders so as to ensure unimpeded installation of pumps and operation of safety grating.
9. Contractor shall apply protective coating to all proposed above ground and below ground piping per project specifications. Contractor shall label pump access hatches, riser piping and force main header piping in the valve vault correspond to the respective pump number as applicable.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

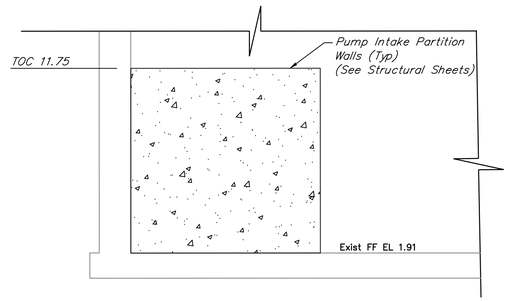
DRY WEATHER PUMP STATION IMPROVEMENTS SECTION 1 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. I-M-4 SHEET NO. 35 OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\MECH.dwg, Jul 08, 2025 - 4:19pm, sa2

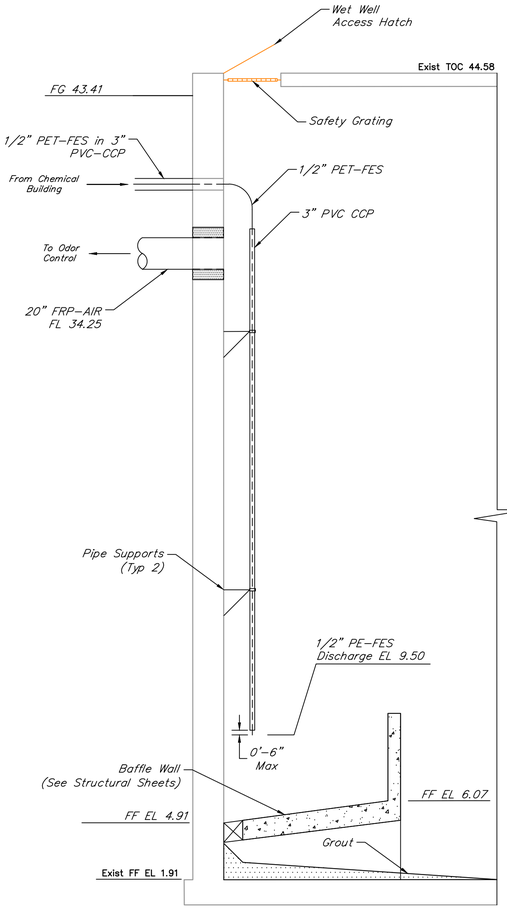
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



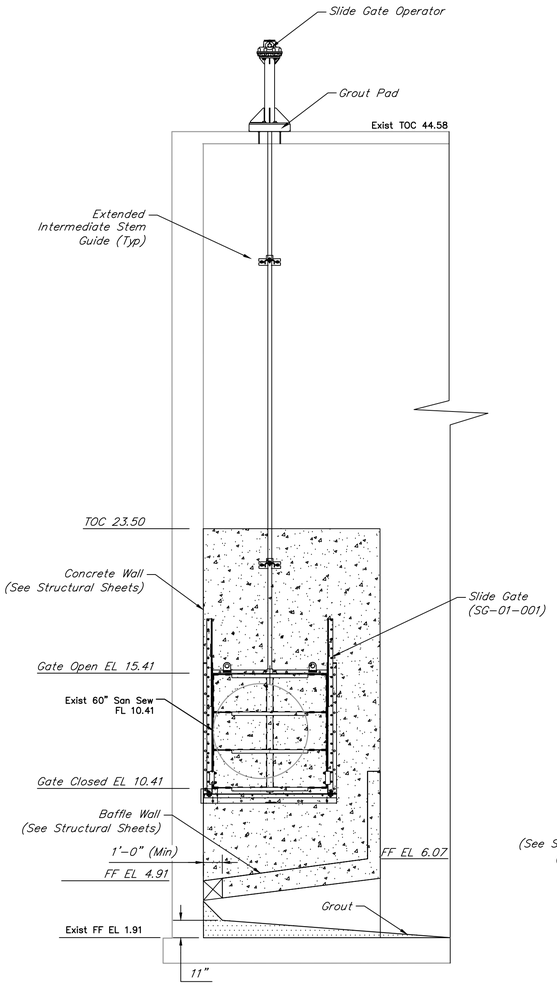
SECTION F
SCALE: 1/4" = 1'-0"

NOTES:

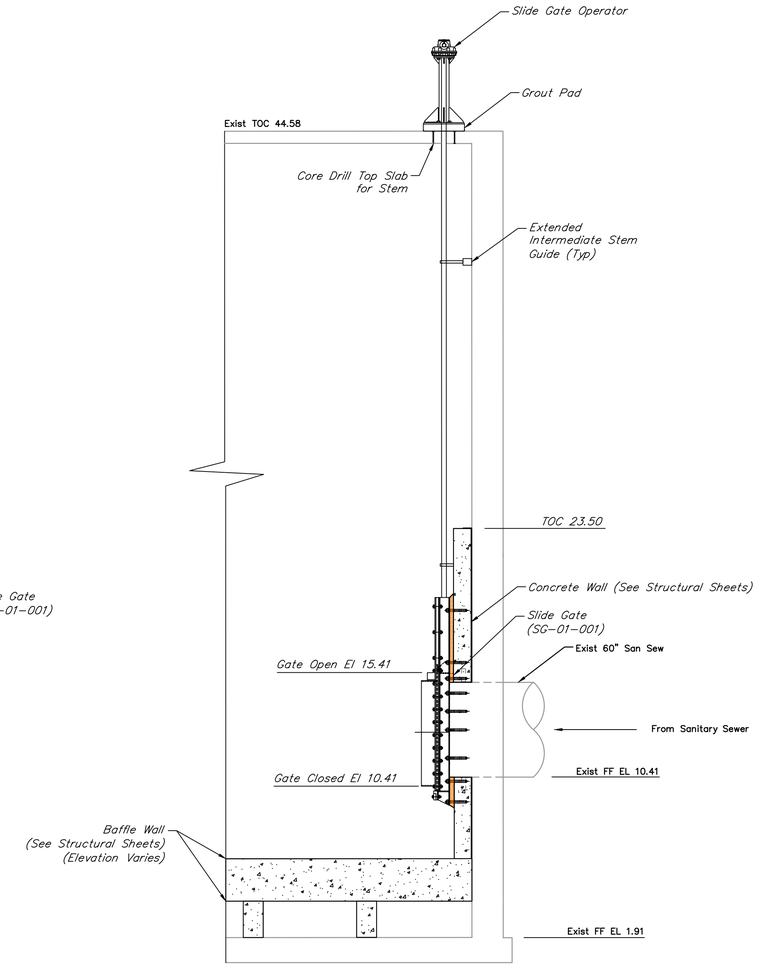
1. Contractor shall field verify horizontal and vertical location of exist 42" and 60" wall penetrations and submit field findings for review by Engineer prior to submittal and fabrication of proposed gates.



SECTION C
SCALE: 1/4" = 1'-0"



SECTION D
SCALE: 1/4" = 1'-0"



SECTION E
SCALE: 1/4" = 1'-0"

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATHER PUMP STATION IMPROVEMENTS SECTION 2 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

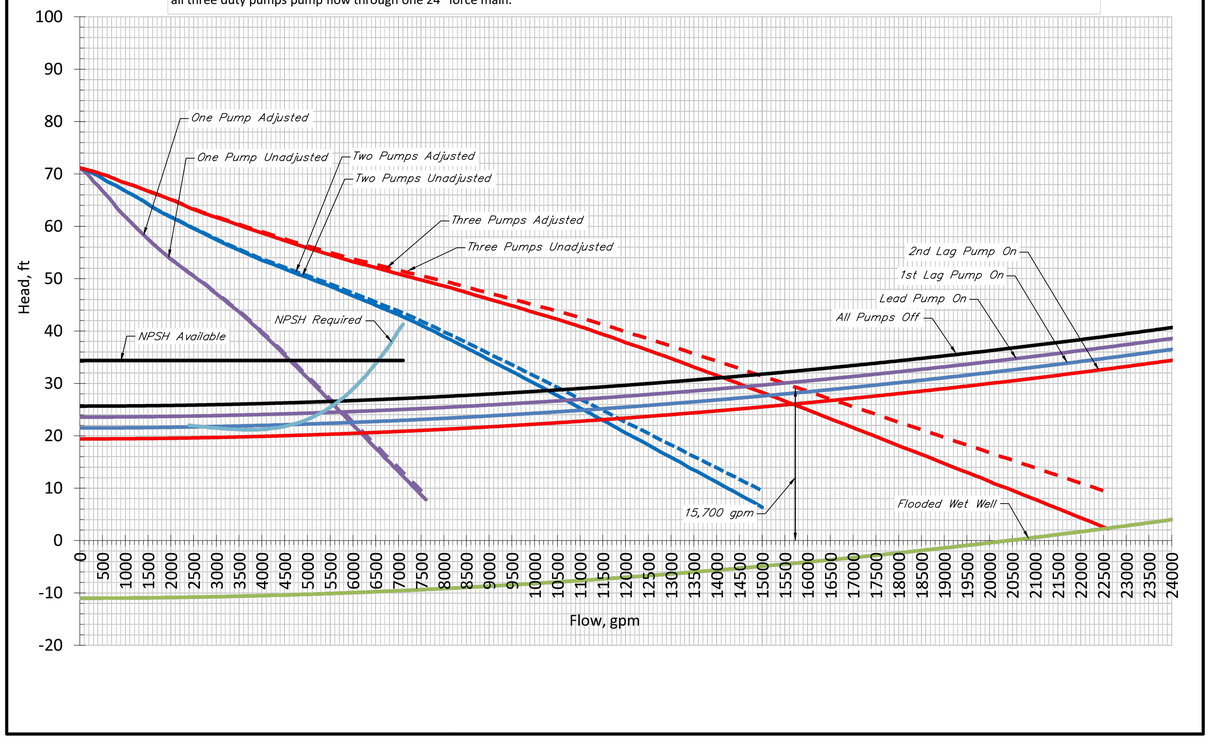
DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. 1-M-5 SHEET NO. 36 OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

SYSTEM A			
PUMP DATA	1 PUMP OPERATING IN OLD DUCTILE IRON PIPE (C=100)	2 PUMP OPERATING IN OLD DUCTILE IRON PIPE (C=100)	3 PUMP OPERATING IN OLD DUCTILE IRON PIPE (C=100)
FLOW (GPM)	5,093	10,186	15,278
TDH (FT.)	32.43	32.26	32.23
MIN. OVERALL EFF. (%)	77%	77%	77%
STATIC HEAD (FT.)	22.54	19.53	16.56
SHAFT HP (MAX.)	45	45	45
RPM (MAX.)	1,175	1,175	1,175

City of Houston
Scott Street Lift Station Improvements
Dry Weather Pump Station (22.0 MGD) - System A

The pump curves shown are based on Flygt N3202 LT 3~616 pumps and adjusted for riser losses based on C=100. The system curve represents approximately 60 linear feet of 20-inch (20") DIP force main and 200 linear feet of 24-inch (24") DIP force main. The design flow path assumes one 24" force main is out of service and all three duty pumps pump flow through one 24" force main.



NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATEHR PUMP STATION
PUMP DATA AND CURVES
SHEET 1 OF 1

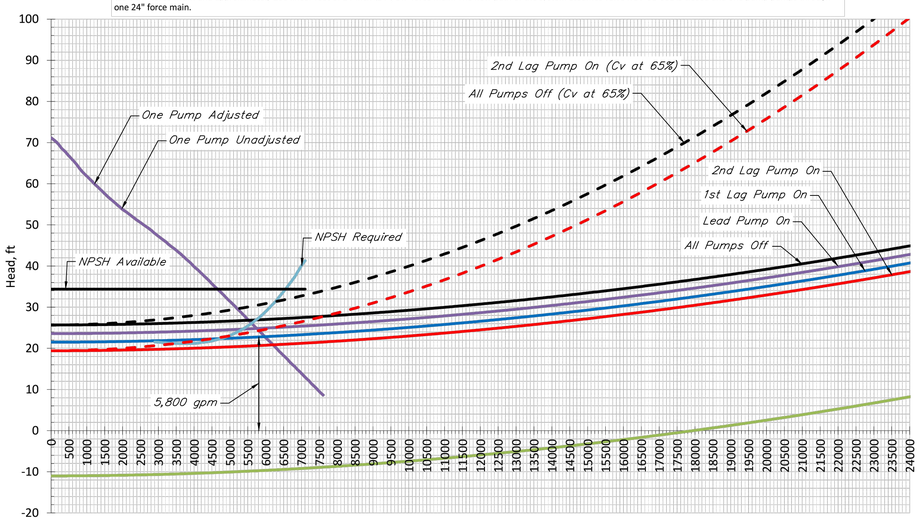
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE NONE HORIZ: XXX VERT: XXX
CATEGORY NO. 1-M-6 SHEET NO. 37 OF XXX
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

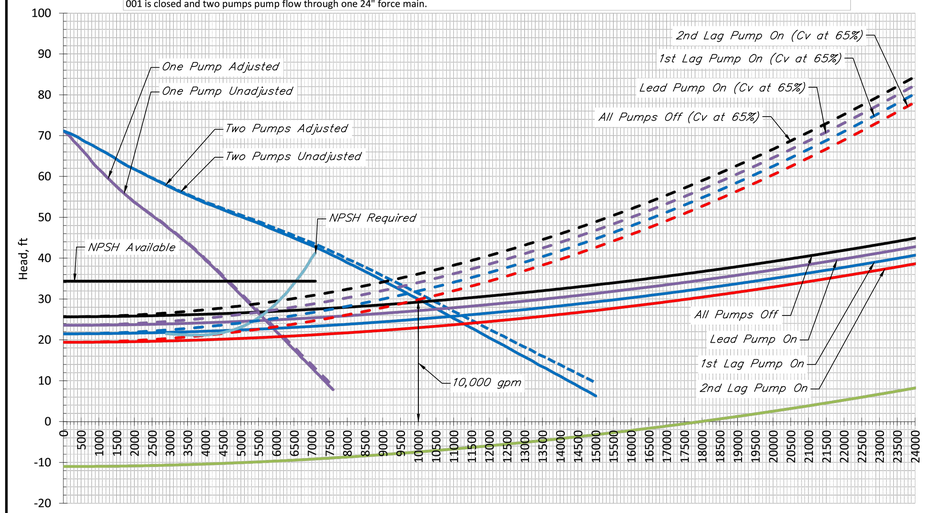
City of Houston
Scott Street Lift Station Improvements
Dry Weather Pump Station (22.0 MGD) - System B1

The pump curves shown are based on Flygt N3202 LT 3~616 pumps and adjusted for riser losses based on C=100. The system curve represents approximately 60 linear feet of 20-inch (20") DIP force main and approximately 200 linear feet of 24-inch (24") DIP force main. The flow path of the system assumes valve KGV-01-001 is closed and one pump pumps through one 24" force main.



City of Houston
Scott Street Lift Station Improvements
Dry Weather Pump Station (22.0 MGD) - System B2

The pump curves shown are based on Flygt N3202 LT 3~616 pumps and adjusted for riser losses based on C=100. The system curve represents approximately 60 linear feet of 20-inch (20") DIP force main and approximately 200 linear feet of 24-inch (24") DIP force main. The flow pat of the system curve assumes valve KGV-01-001 is closed and two pumps pump flow through one 24" force main.



NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

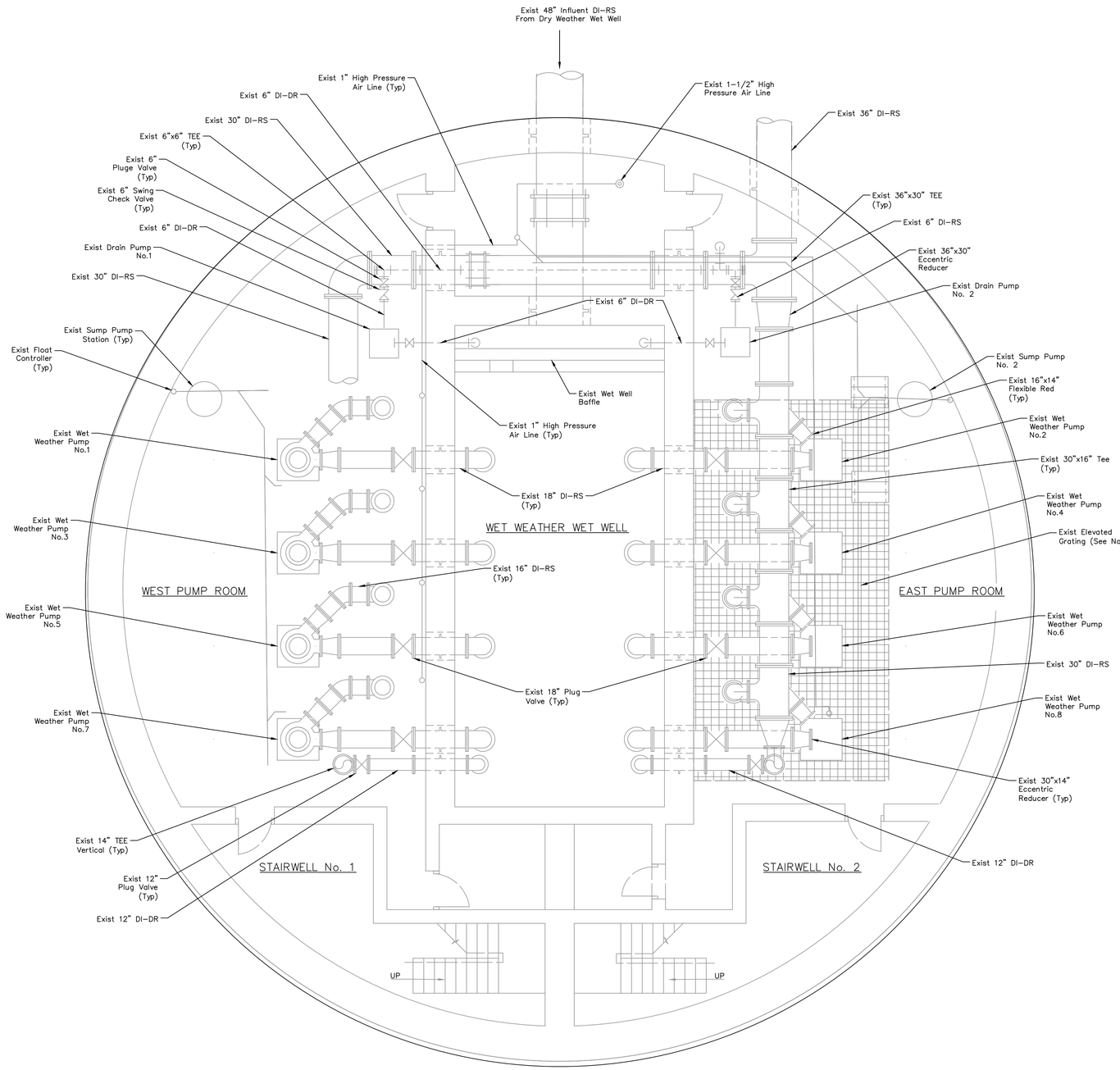
DRY WEATHER PUMP STATION
PUMP DATA AND CURVES
SHEET 2 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. 1-M-7 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY



0 1 2 3 6 12

SCALE: 3/16"=1'

NOTES:

1. Grating not shown on West Pump Room only for Clarification. West Room Grating is a Mirrored Set-Up from East Pump Room.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E

P.E. Serial No.: 125999

Date: APRIL 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION LOWER LEVEL - EXISTING

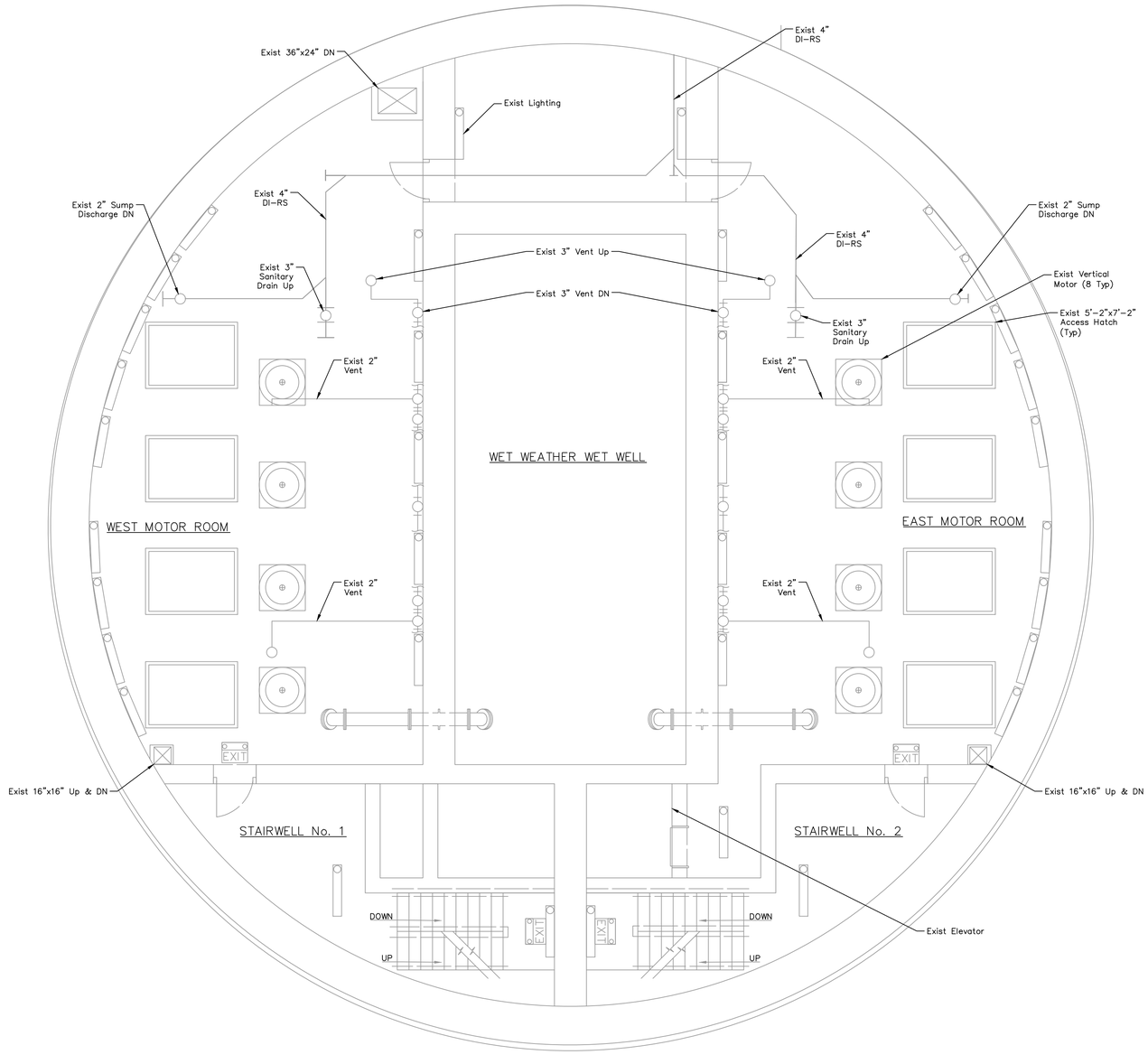
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

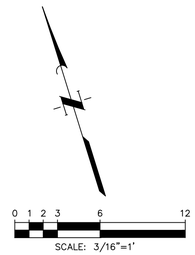
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-1 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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Engineer: WILLIAM R. SAGASTIZADO, P.E

P.E. Serial No.: 125999

Date: APRIL 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION MEZZANINE LEVEL – EXISTING

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

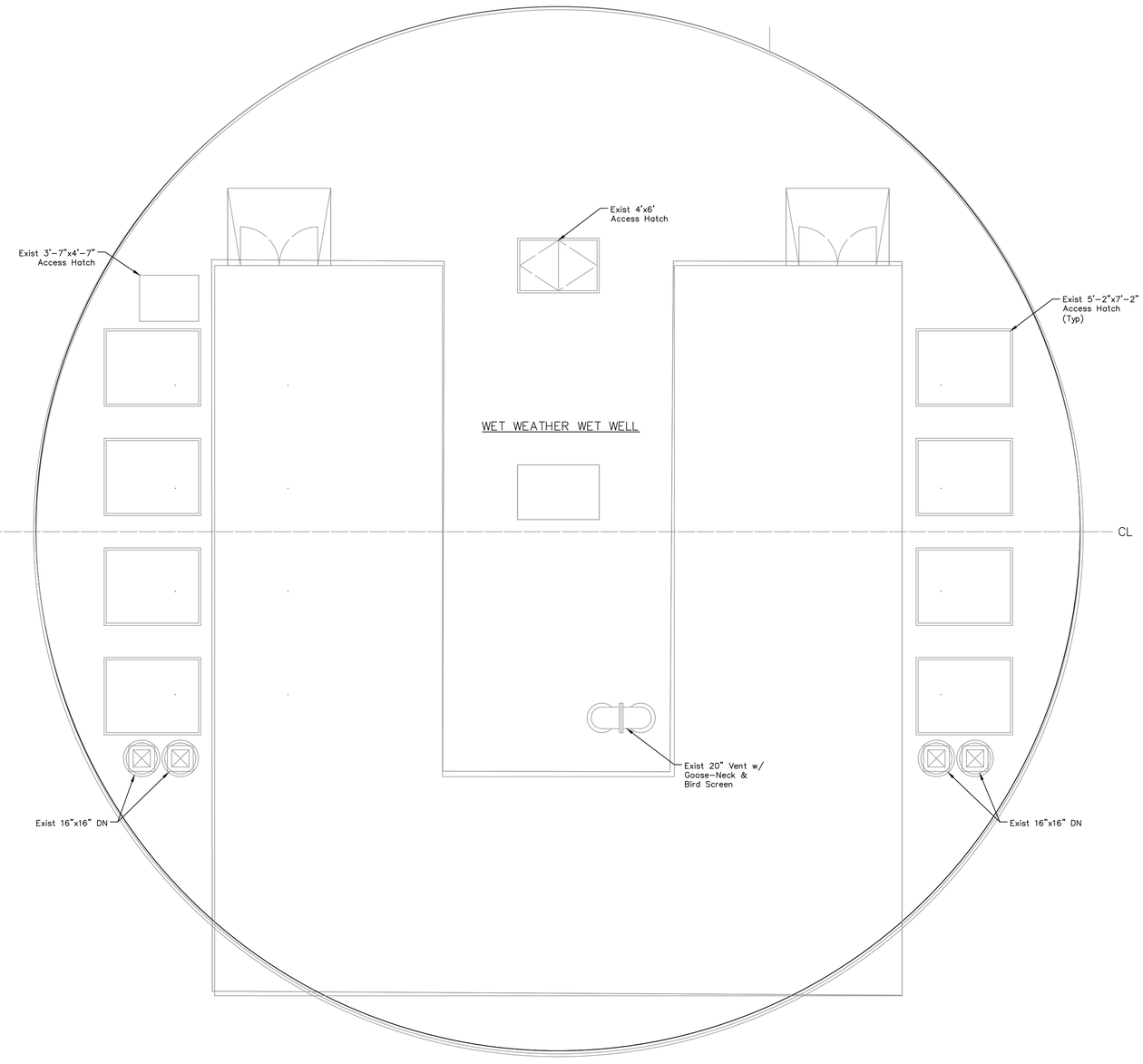
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

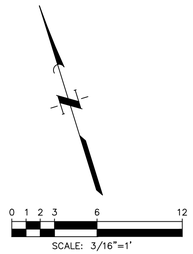
CATEGORY NO. 2-M-2 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MECH-3.dwg, 4/17/2025 11:22:32 AM, dd2

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NOTES:

1. Interior Excluded for Clarity.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E

P.E. Serial No.: 125999

Date: APRIL 2025

QUIDDITY

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION GROUND LEVEL EXTERIOR – EXISTING

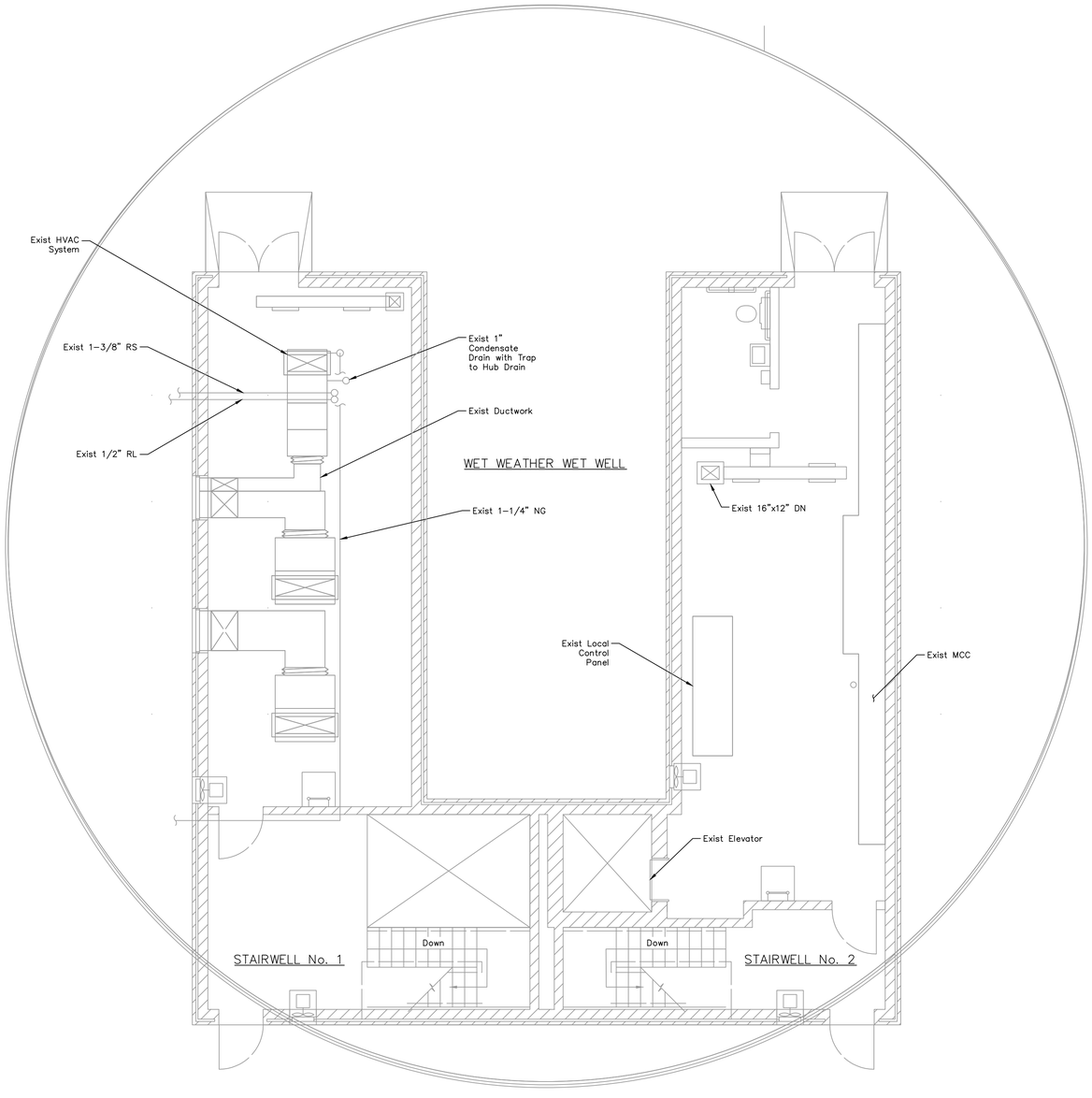
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

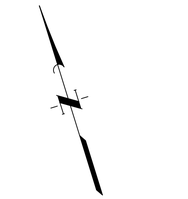
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-3 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NOTES:

1. Exterior Excluded for Clarity.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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Engineer: WILLIAM R. SAGASTIZADO, P.E

P.E. Serial No.: 125999

Date: APRIL 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION GROUND LEVEL INTERIOR – EXISTING

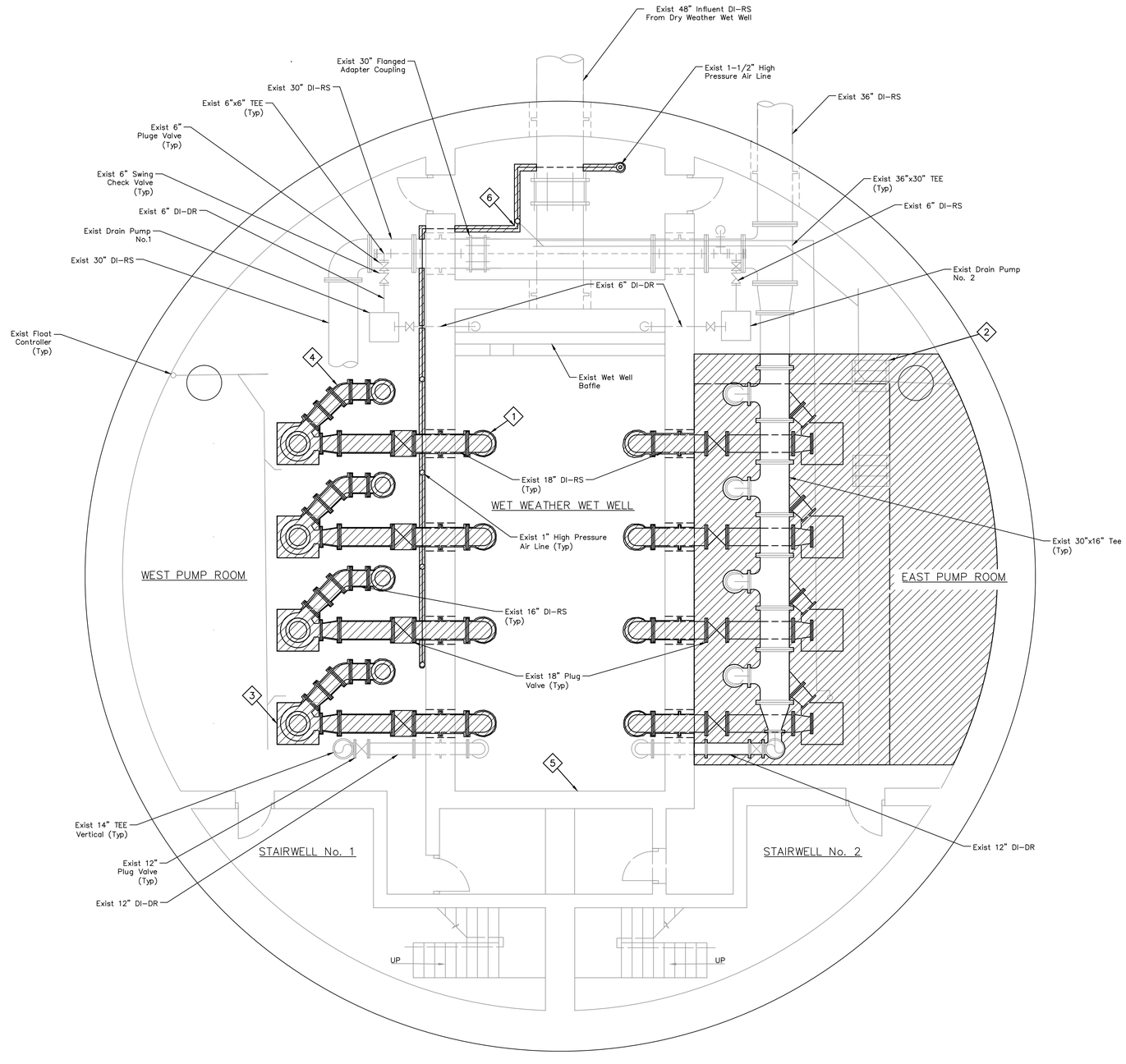
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2–M–4 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK

No.	DESCRIPTION
1	Demolish Existing 18" Suction Piping, Wall Thimble, Valves, Supports, and Hardware Related to the Wet Weather Pumps (Typ 8).
2	Demolish all Grating Supports, Handrails and Miscellaneous Metals Related to the Elevated Platform. Contractor Shall Grind Down Anchors and Cover with Grout.
3	Demolish Existing Wet Weather Pumps, Associated Concrete Supports, Small Diameter Piping, Shaft, Controls, Conduit, Wire and Related Accessories.
4	Demolish Existing Discharge Piping to the Vertical Portion of the Pipe, Valves, Small Diameter Air Piping to the Flow Control valves, Supports and Miscellaneous Metals.
5	Demolish Existing T-LOK Liner Inside of the Wet Well.
6	Demolish Existing Air Compressor, High Pressure Air Piping, and Electrical Controls.

0 1 2 3 6 12
SCALE: 3/16"=1'

LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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P.E. Serial No.: 125999
Date: APRIL 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

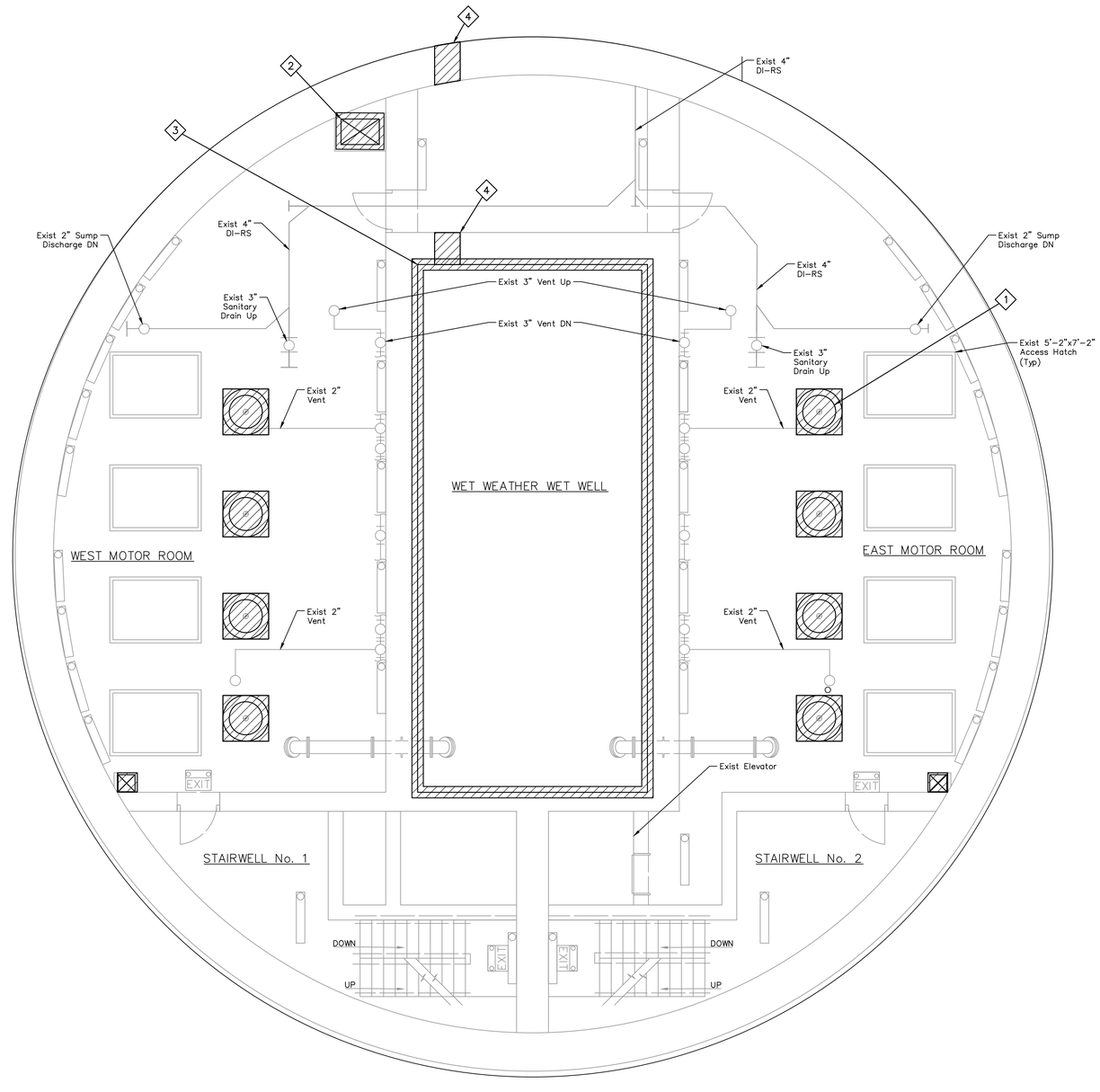
WET WEATHER LIFT STATION LOWER LEVEL – DEMOLITION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

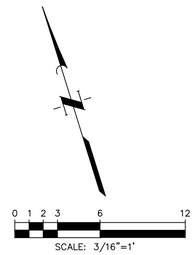
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-5 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MECH-1.dwg, 4/16/2025 8:47:51 AM, dd2

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK	
No.	DESCRIPTION
1	Demolish the Existing Motors from the Wet Weather Pumps, Conduit, Wire Associated with the Motor.
2	Demolish Existing Air Ducts, Supports, and Hardware.
3	Demolish T-LOK Liner Inside Wet Well.
4	Contractor to Core through the Existing Walls to Allow for Construction of the FRP Duct Works.



LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E

P.E. Serial No.: 125999

Date: APRIL 2025

QUIDDITY

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION MEZZANINE LEVEL – DEMOLITION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

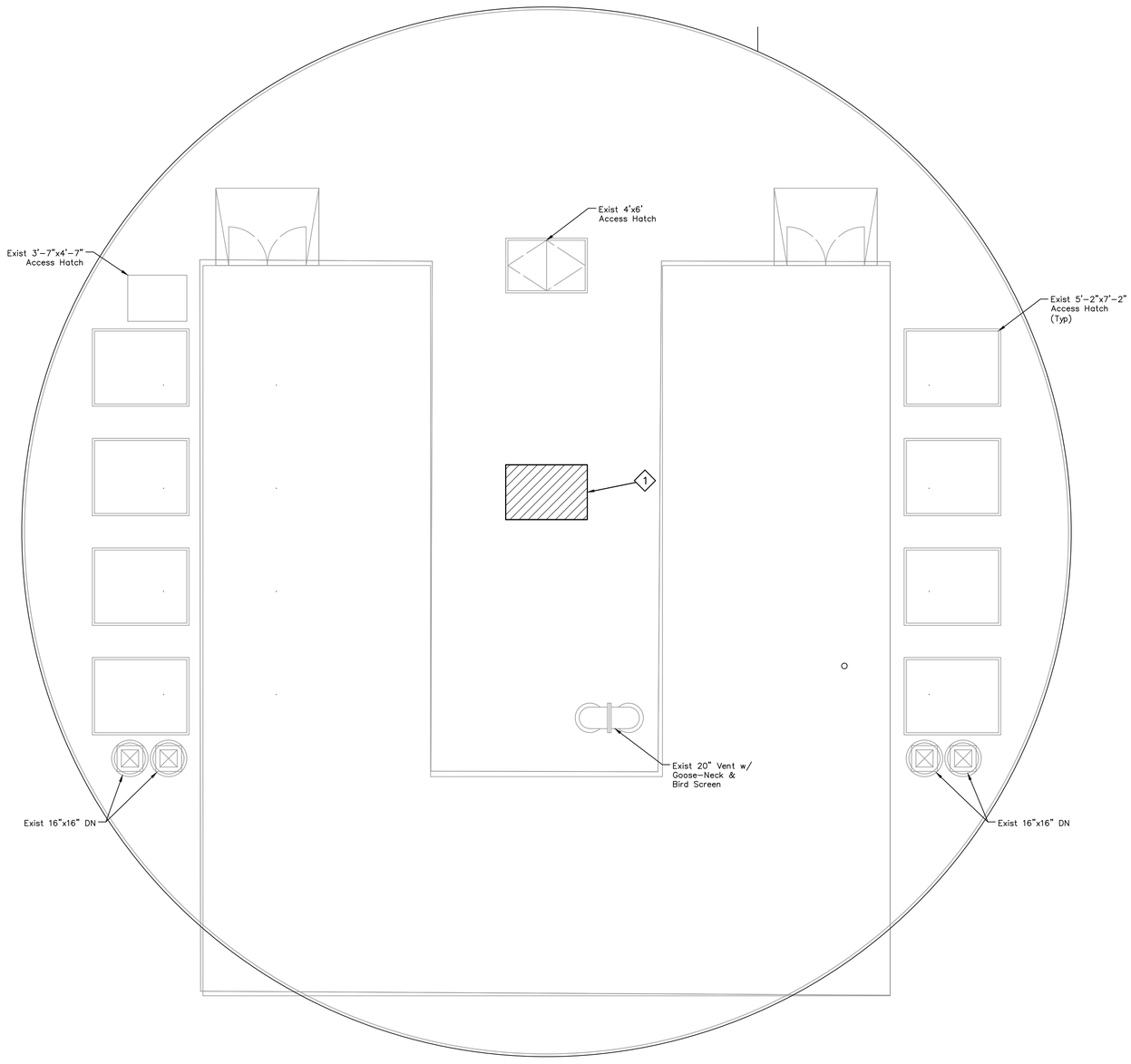
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-6 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK

No.	DESCRIPTION
1	Contractor Shall Saw Cut the Existing Top Slab. See Structural Sheets.

0 1 2 3 6 12
SCALE: 3/16"=1'

NOTES:

1. Interior Excluded for Clarity.

LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E

P.E. Serial No.: 125999

Date: APRIL 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION GROUND LEVEL EXTERIOR – DEMOLITION

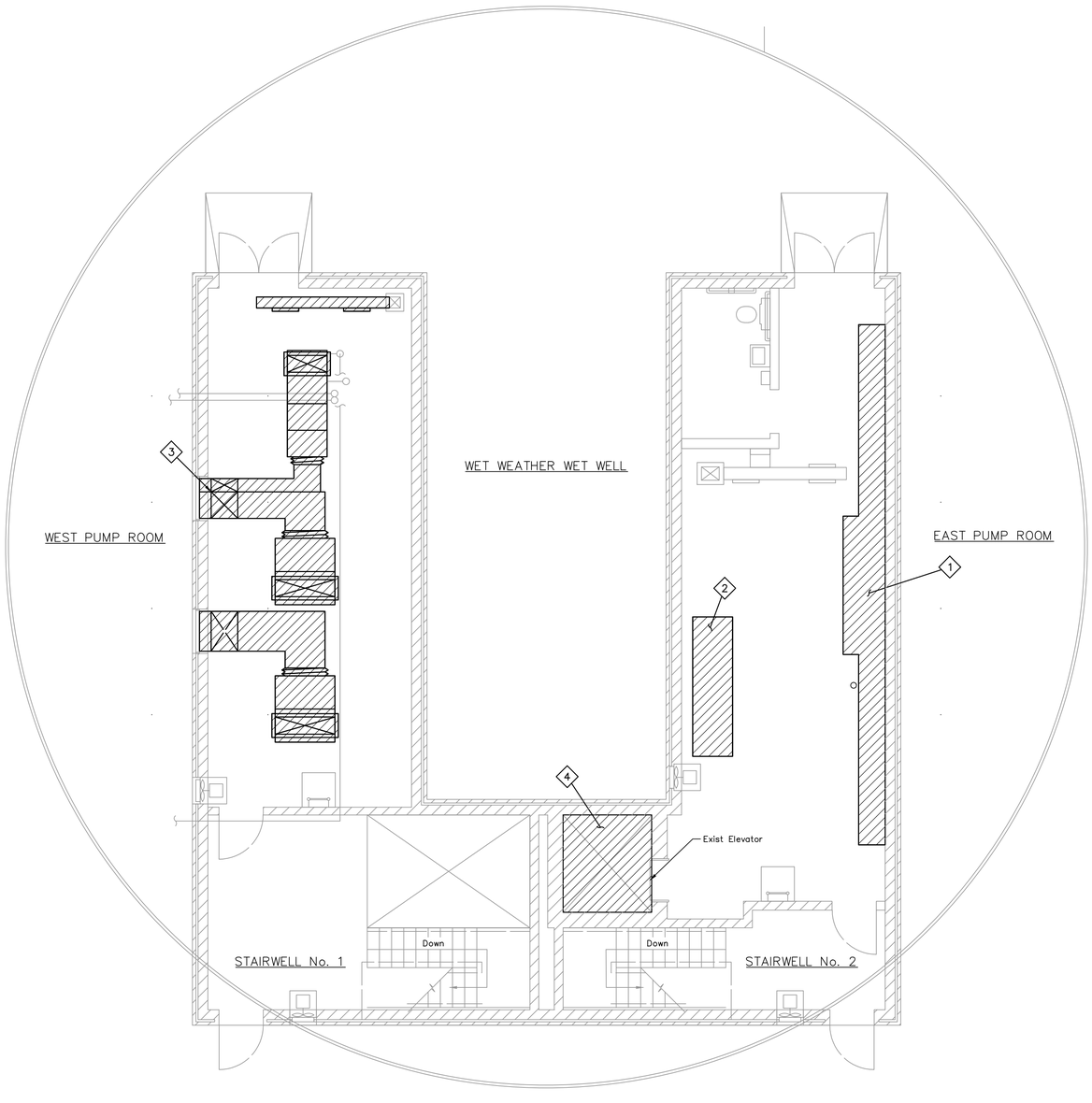
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-7 SHEET NO. XXX OF XXX

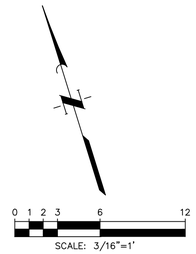
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK

No.	DESCRIPTION
1	Demolish Existing MCC Conduit and Wiring Related to the MCC.
2	Demolish Existing Local Control Conduit and Wiring Related to the Local Control Panel.
3	Demolish Existing HVAC, Ducts, Conduit, Wiring, Small Diameter Piping Related to the HVAC.
4	Abandon Existing Elevator and Demolish All Existing Elevator Controls.



NOTES:

1. Exterior Excluded for Clarity.

LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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Engineer: WILLIAM R. SAGASTIZADO, P.E
P.E. Serial No.: 125999
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

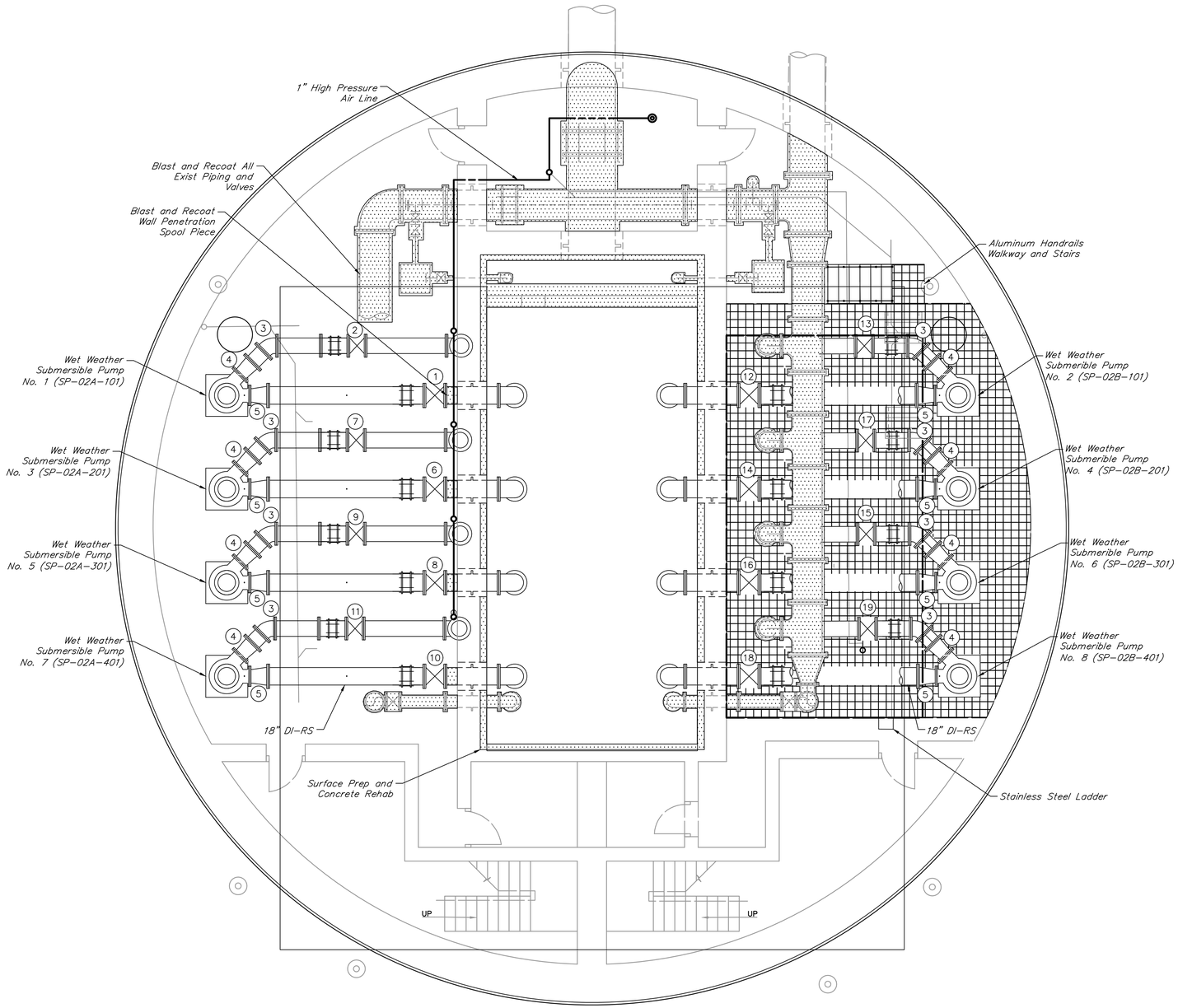
WET WEATHER LIFT STATION GROUND LEVEL INTERIOR – DEMOLITION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-8 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

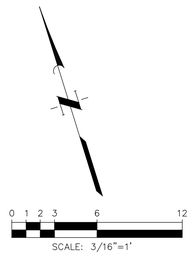
K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MECH-4.dwg, 4/16/2025 6:27:14 AM, dd2

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



VALVE AND ACCESSORIES SCHEDULES

No.	DESCRIPTION
(1)	18" Plug Valve, FJ (PV-02A-101)
(2)	16" Plug Valve, FJ (PV-02A-102)
(3)	16" 45° Bend, FJ
(4)	14"x16" Reducer, FJ
(5)	14"x18" Reducer, FJ
(6)	18" Plug Valve, FJ (PV-02A-201)
(7)	16" Plug Valve, FJ (PV-02A-202)
(8)	18" Plug Valve, FJ (PV-02A-301)
(9)	16" Plug Valve, FJ (PV-02A-302)
(10)	18" Plug Valve, FJ (PV-02A-401)
(11)	16" Plug Valve, FJ (PV-02A-402)
(12)	18" Plug Valve, FJ (PV-02B-101)
(13)	16" Plug Valve, FJ (PV-02B-102)
(14)	18" Plug Valve, FJ (PV-02B-201)
(15)	16" Plug Valve, FJ (PV-02B-202)
(16)	18" Plug Valve, FJ (PV-02B-301)
(17)	16" Plug Valve, FJ (PV-02B-302)
(18)	18" Plug Valve, FJ (PV-02B-401)
(19)	16" Plug Valve. FJ (PV-02B-402)



LEGEND:

RECOAT

NOTES:

1. All proposed grating and handrails shall be made of aluminum and coated in powder-coated dark green.
2. Stairway shall have non-slip steps.
3. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTODD

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION LOWER LEVEL-PROPOSED

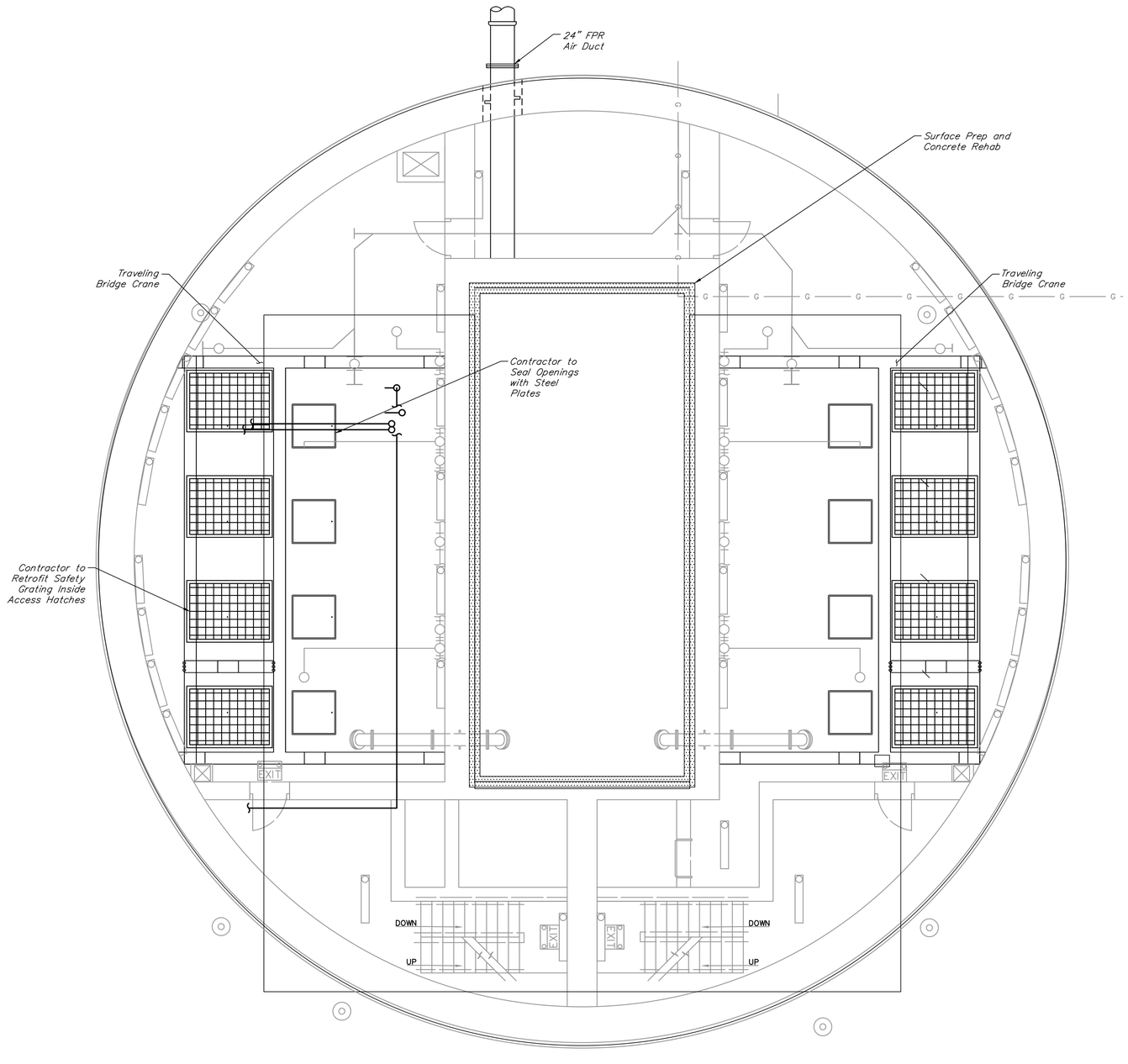
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

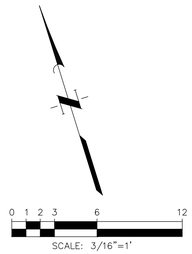
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-9 SHEET NO. 46 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





LEGEND:

RECOAT

NOTES:

1. All proposed grating and handrails shall be made of aluminum and coated in power-coated dark green.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION
MEZZANINE LEVEL-PROPOSED

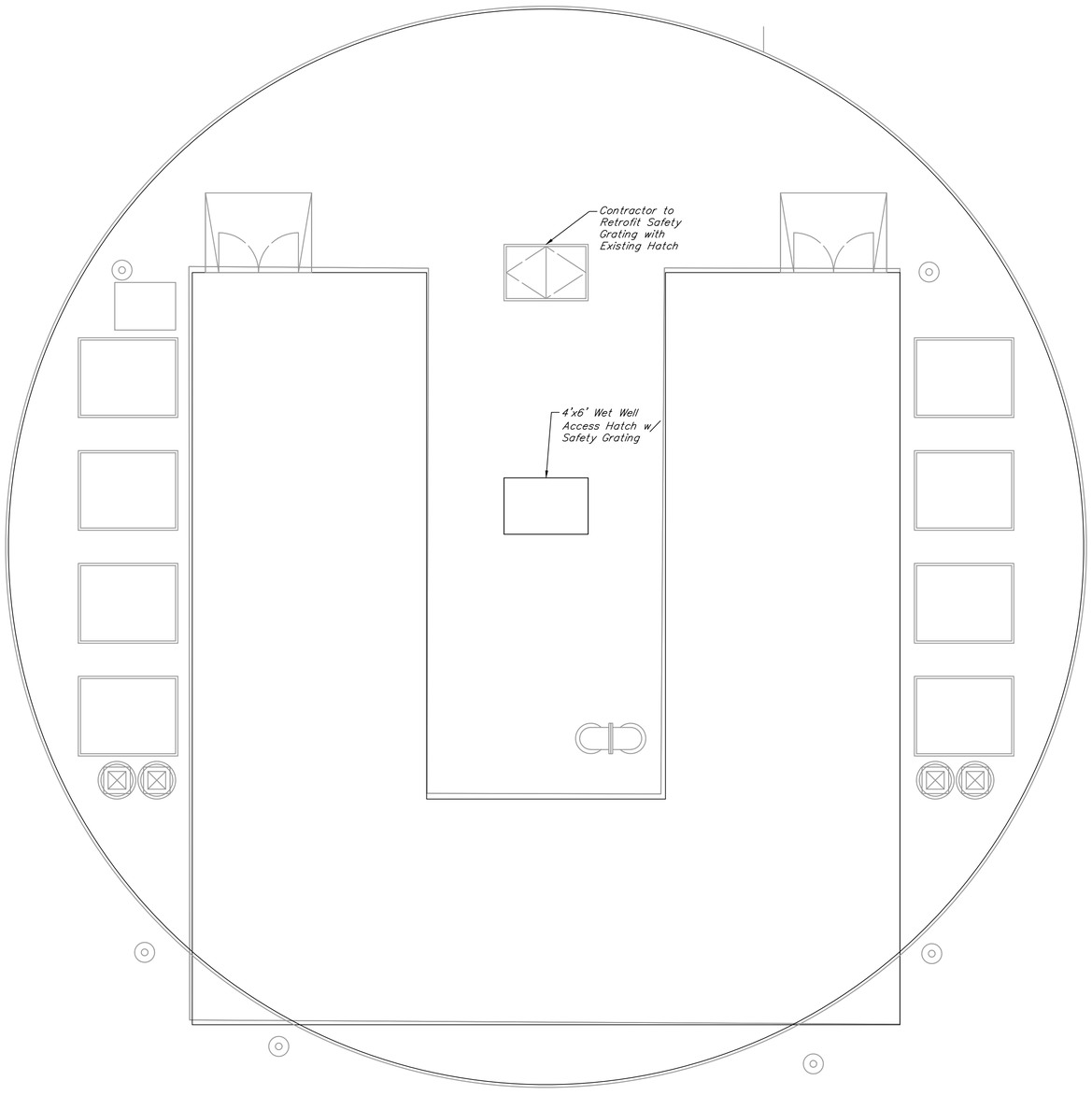
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

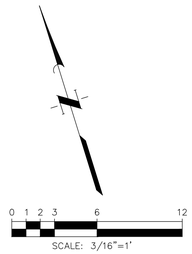
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-10 SHEET NO. 47 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NOTES:

1. Interior Excluded for Clarity.
2. All proposed hatch covers shall be coated in forest green and labeled.
3. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION GROUND LEVEL EXTERIOR – PROPOSED

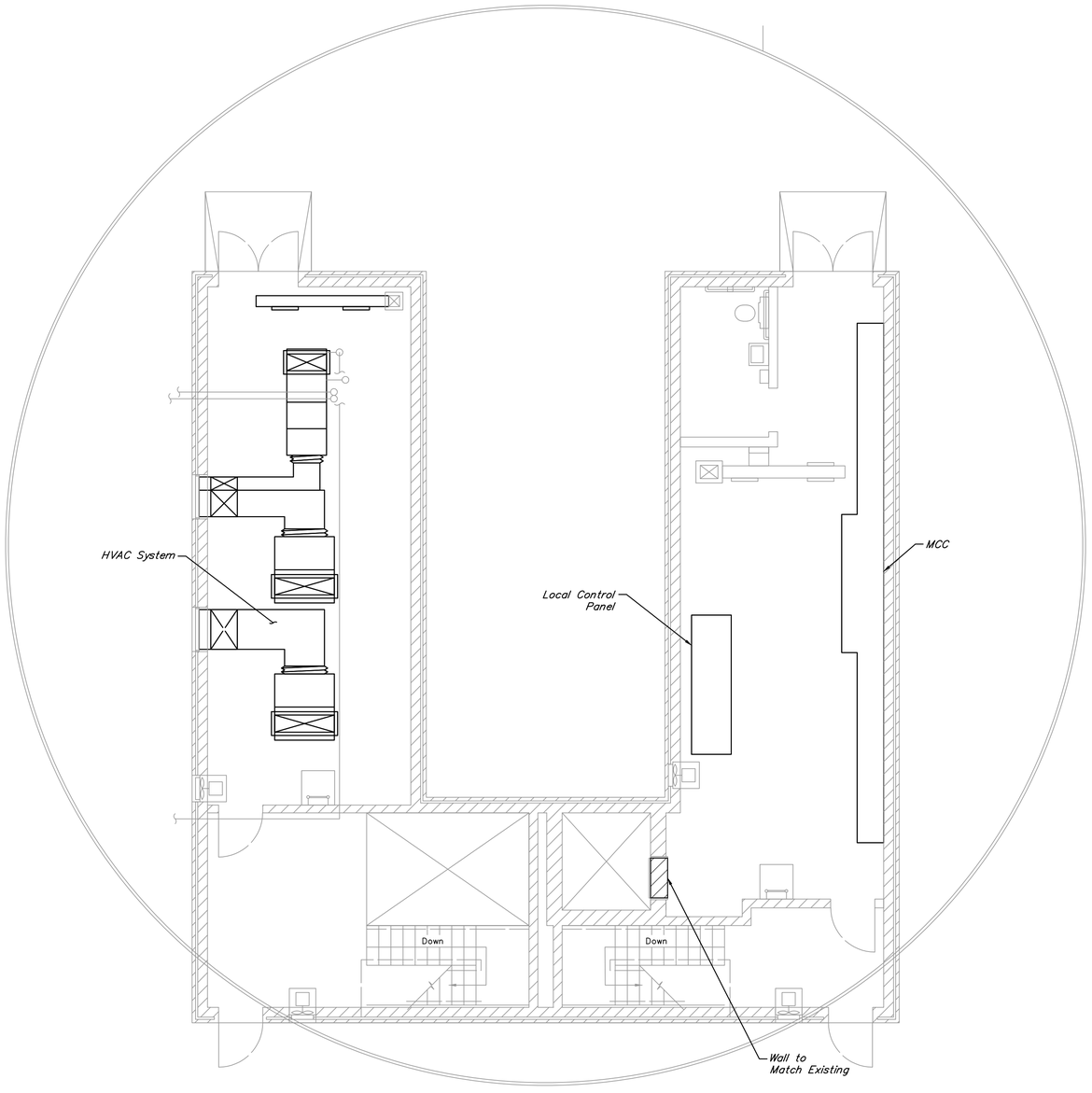
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

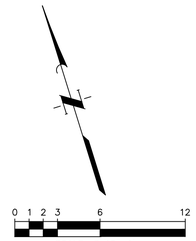
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-11 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NOTES:

1. Exterior Excluded for Clarity.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: APRIL 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION GROUND LEVEL INTERIOR – PROPOSED

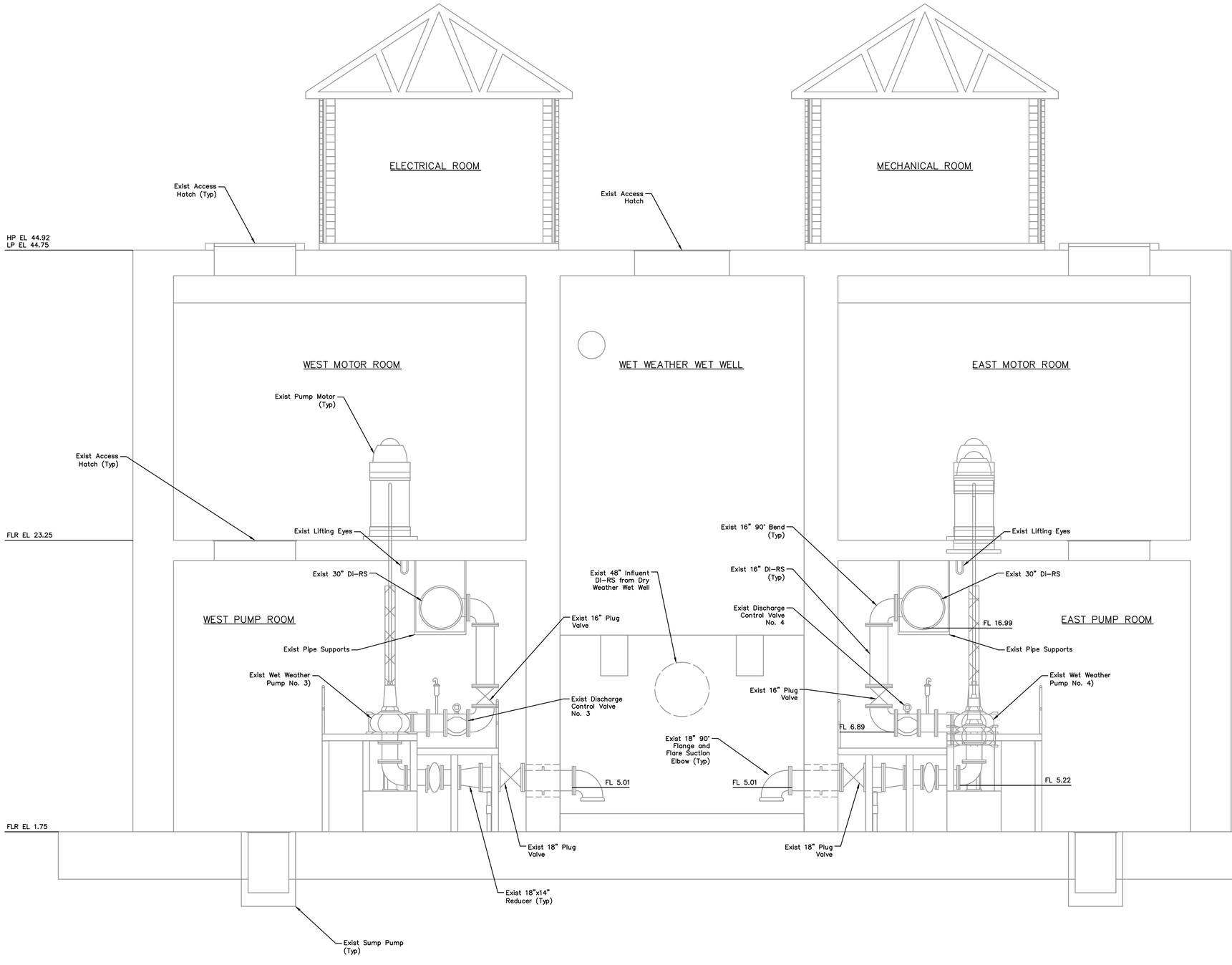
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-12 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 1 2 4 8 12
SCALE: 1/4" = 1'

NOTES:

1. Grating not shown on West Pump Room only for Clarification. West Room Grating is a Mirrored Set-Up from East Pump Room.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

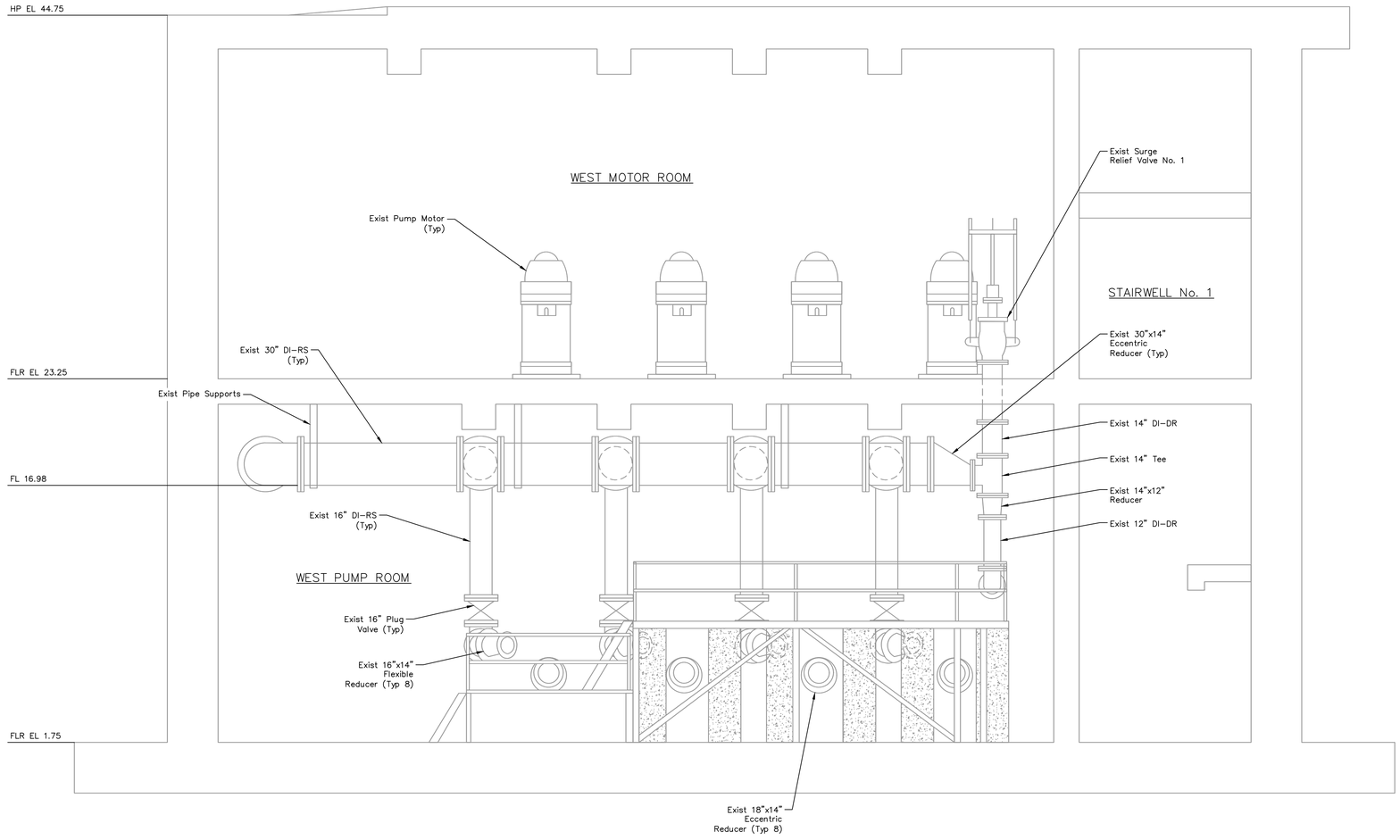
SCOTT STREET No. 1
LIFT STATION REHABILITATION

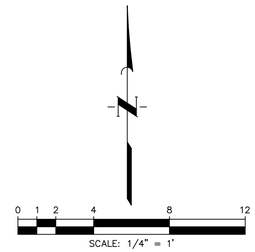
WET WEATHER LIFT STATION LOWER LEVEL – EXISTING

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-13 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NO.	DATE	REVISIONS	APP.

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Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: APRIL 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTODD

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION
MEZZANINE LEVEL – EXISTING

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

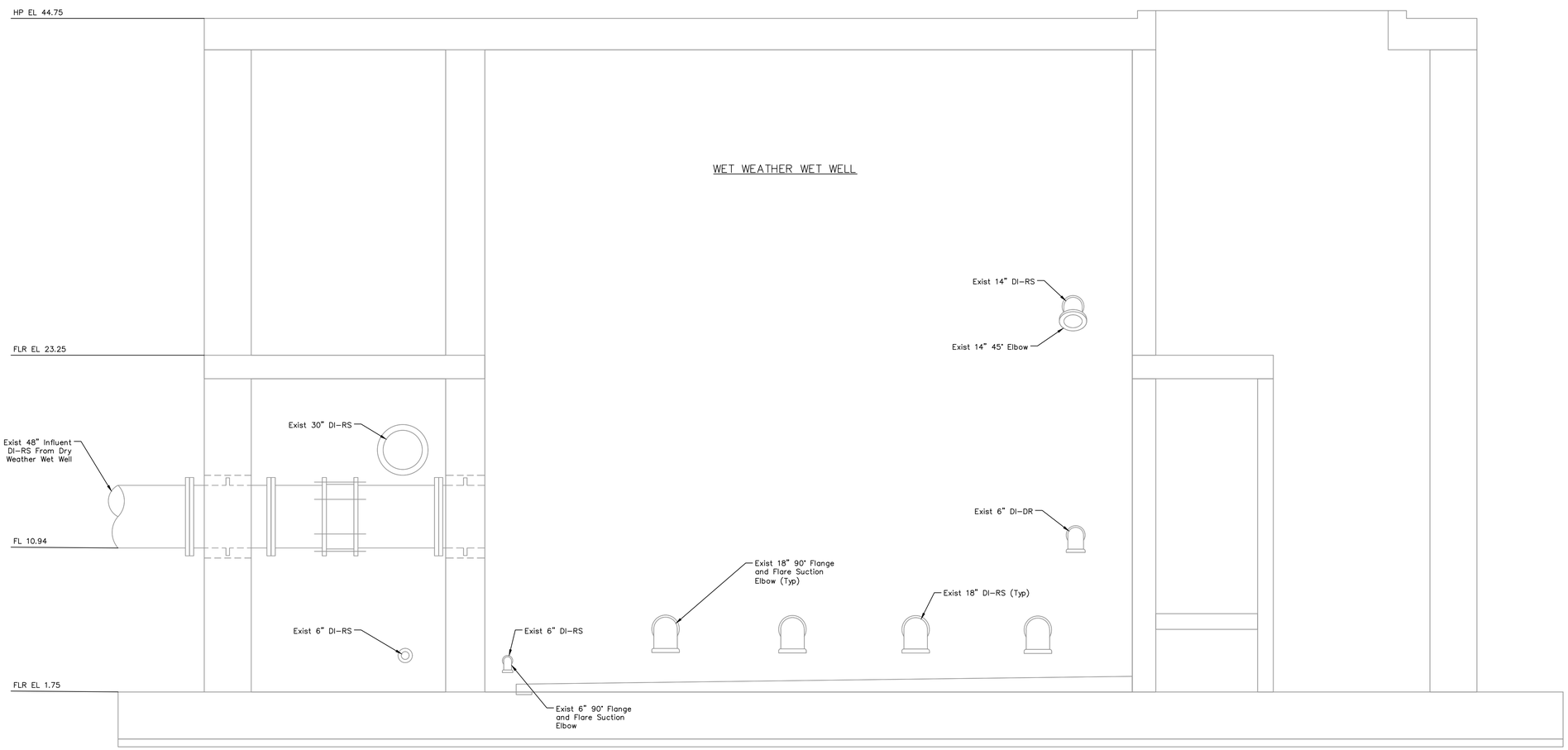
DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

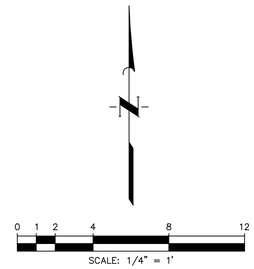
CATEGORY NO. 2-M-14 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MECH-3.dwg, 4/14/2025 10:44:38 AM, dd2

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NOTES:

1. Interior Excluded for Clarity.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: APRIL 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION EXISTING

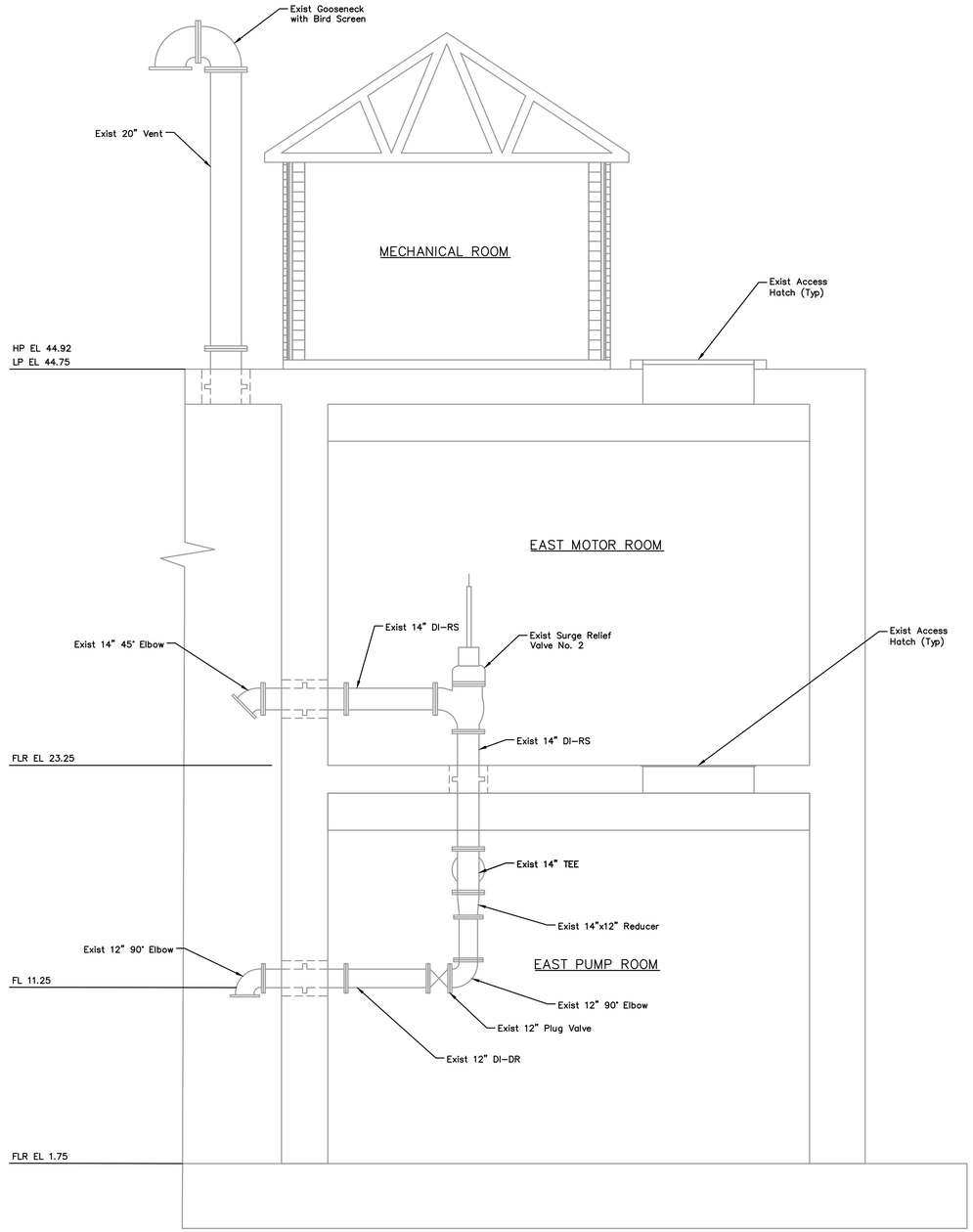
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-15 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



0 1 2 4 8 12
SCALE: 1/4" = 1'

NOTES:

1. Exterior Excluded for Clarity.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

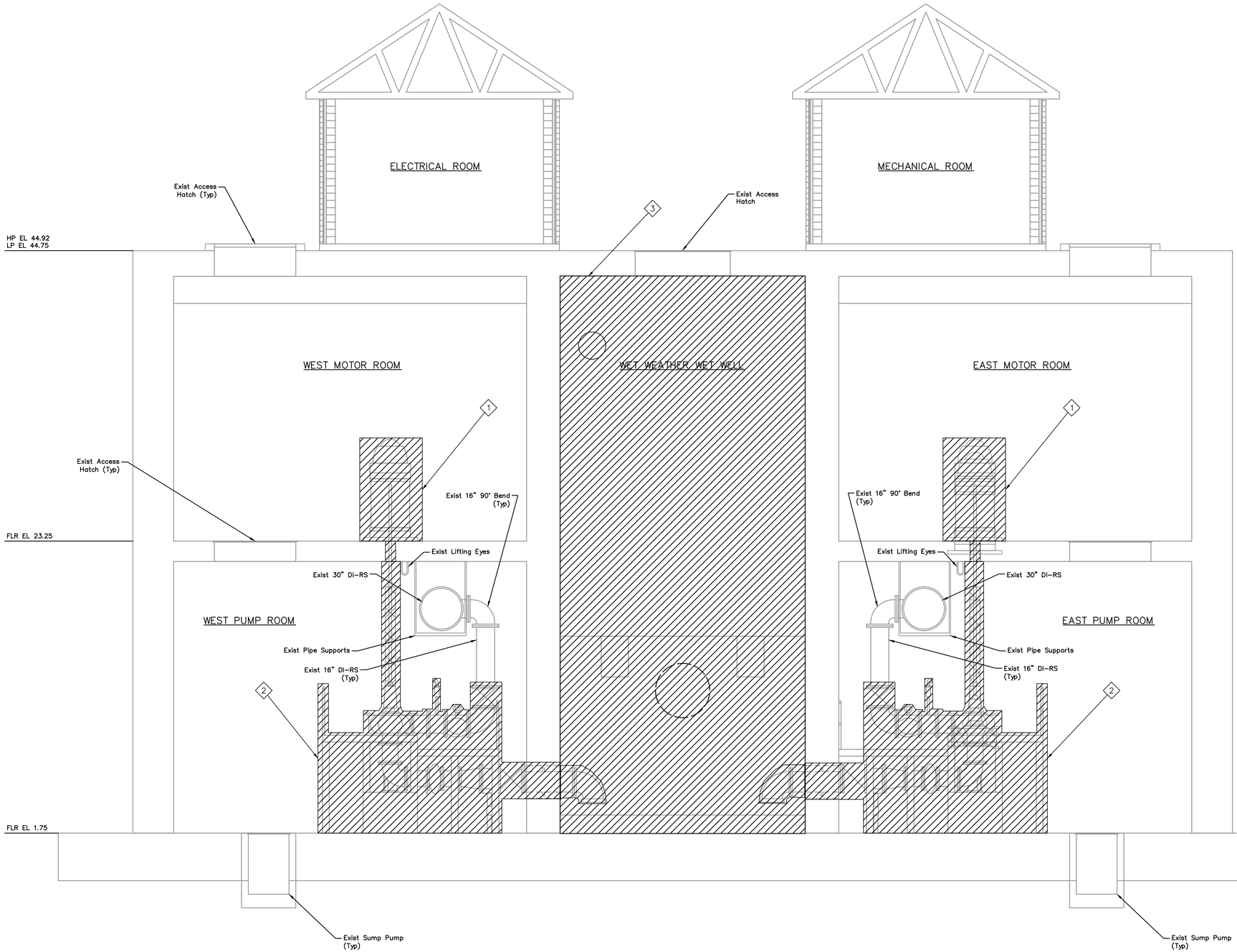
SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION
EAST SECTION – EXISTING

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-16 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK

No.	DESCRIPTION
1	Demolish the Existing Motors from the Wet Weather Pumps, Conduit, Wire Associated with Motor.
2	Demolish Existing Wet Weather Pumps Associated Concrete Supports, Small Diameter Piping, Shaft, Controls, Conduit, Wire and Related Accessories.
3	Demolish T-LOK Liner Inside Wet Well.

0 1 2 4 8 12
SCALE: 1/4" = 1'

LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025
JOB NO: 00050-0099-01
DGN BY: EMMARTINEZ
DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

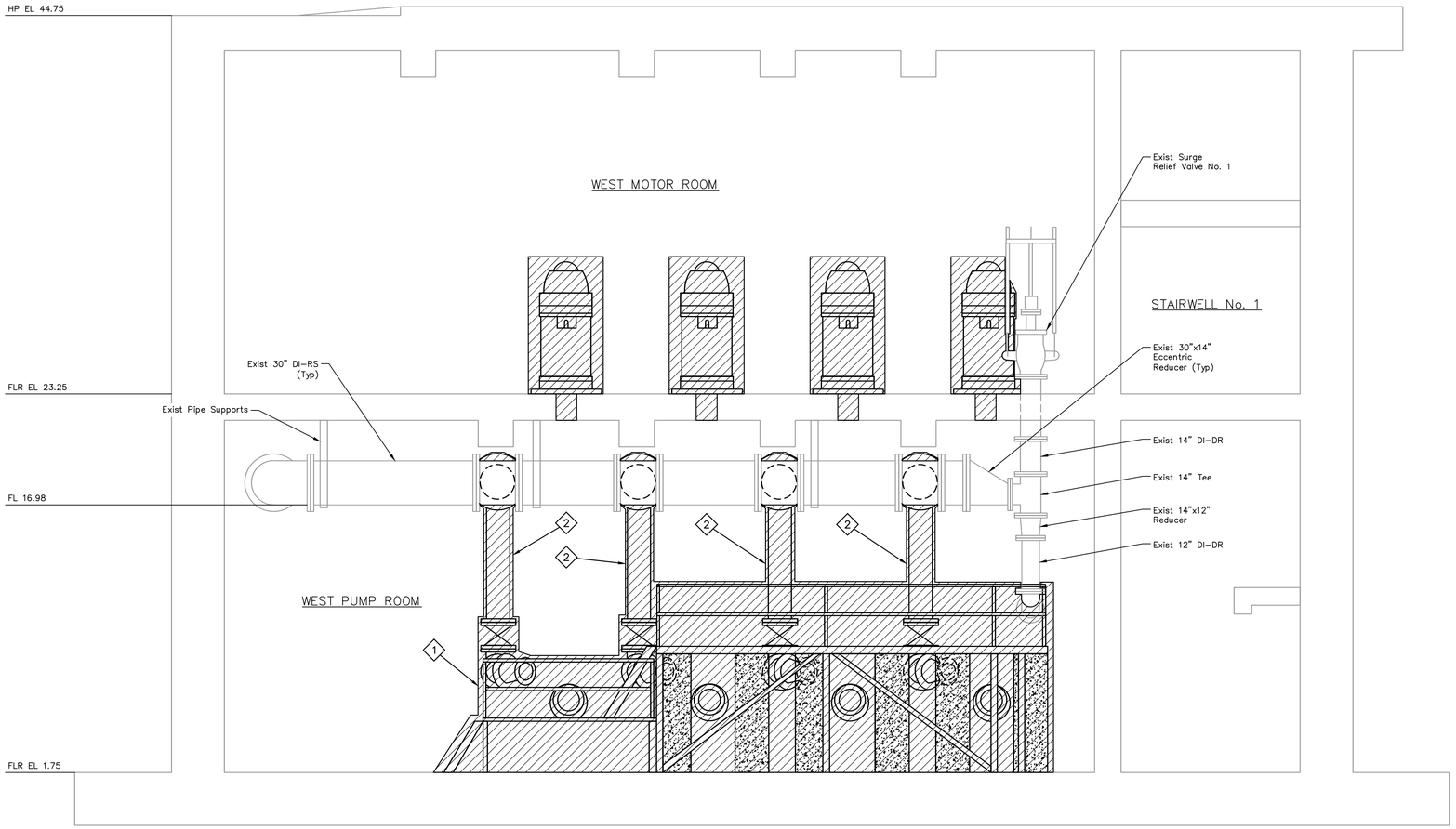
SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION
LOWER LEVEL – DEMOLITION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-17 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK

No.	DESCRIPTION
1	Demolish all Grating, Supports, Handrails and Miscellaneous Metals Related to the elevated Platform. Contractor Shall Grind down Anchors and Cover with Grout.
2	Demolish Existing Discharge Piping to the Vertical Portion of the Pipe, Valves, Supports and Miscellaneous Metals.

0 1 2 4 8 12
SCALE: 1/4" = 1'

LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: APRIL 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

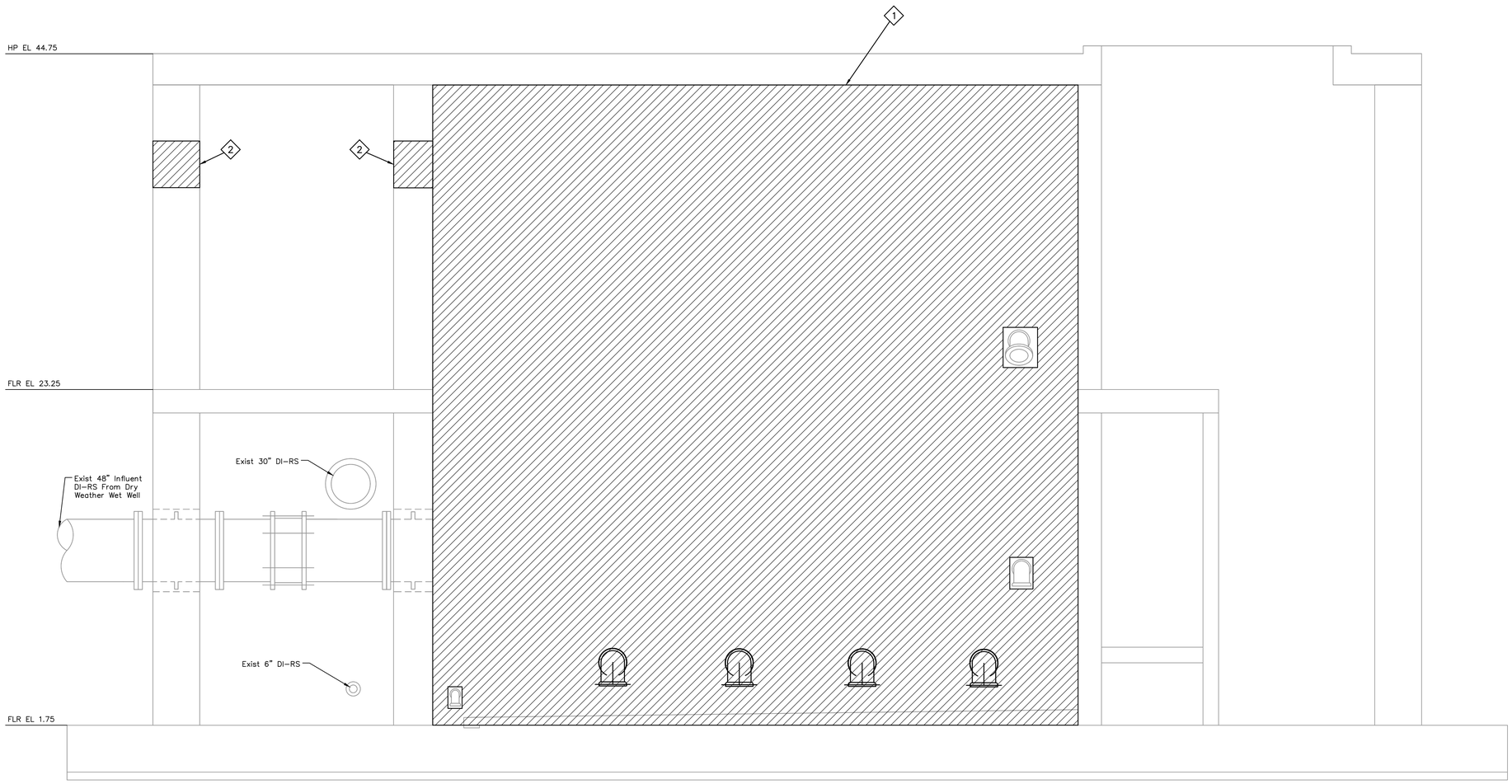
WET WEATHER LIFT STATION
MEZZANINE LEVEL – DEMOLITION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-18 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MECH-3.dwg, 4/14/2025 10:51:40 AM, dd2

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK

No.	DESCRIPTION
1	Demolish T-LOK Liner Inside Wet Well.
2	Contractor to Core Through the Existing Walls to Allow for Construction of the FRP Duct Works.

0 1 2 4 8 12
SCALE: 1/4" = 1'

NOTES:

1. Interior Excluded for Clarity.

LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: APRIL 2025

QUIDDITY
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

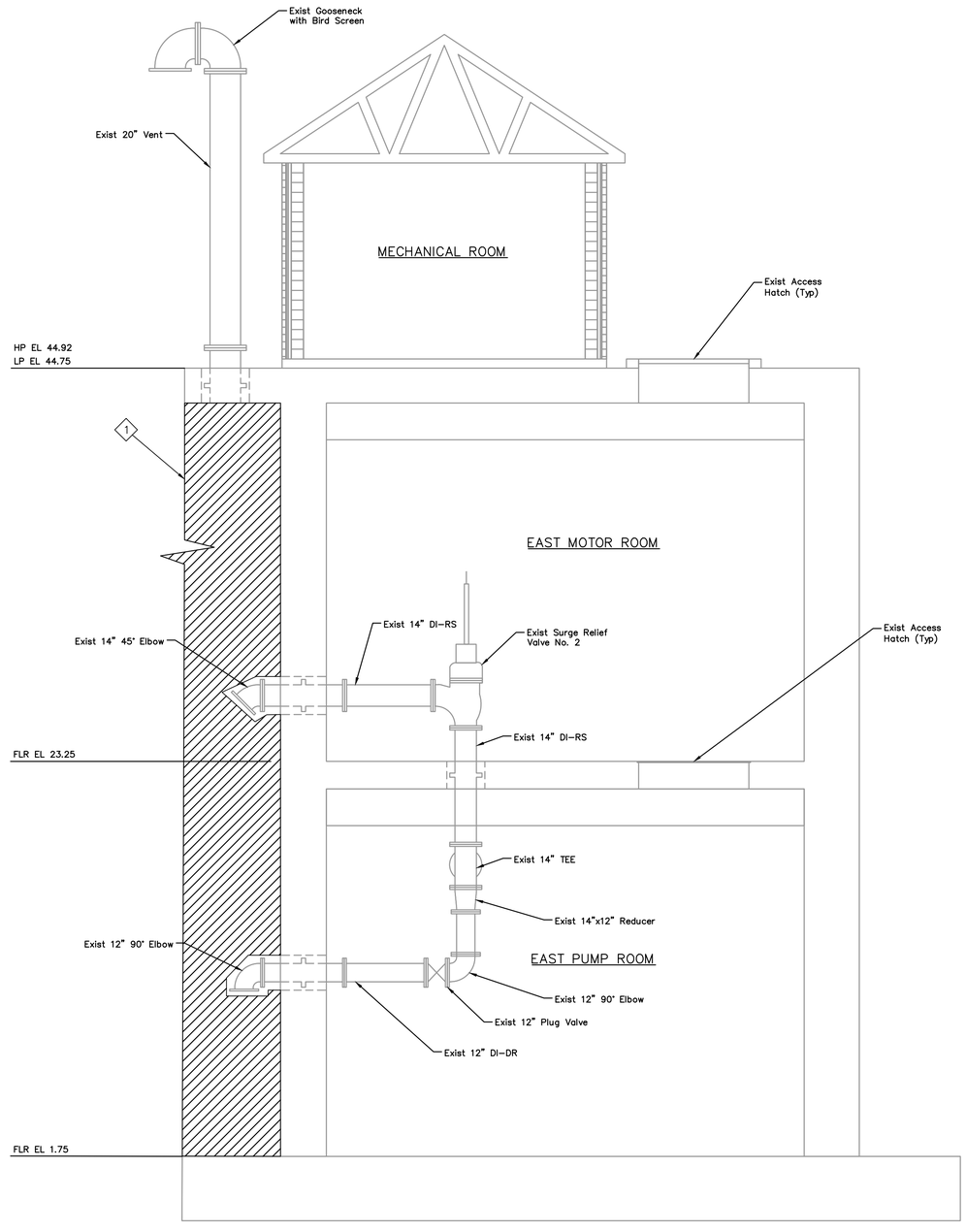
SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION DEMOLITION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-19 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK	
No.	DESCRIPTION
1	Demolish T-LOK Liner Inside Wet Well.

N

0 1 2 4 8 12
SCALE: 1/4" = 1'

NOTES:

1. Exterior Excluded for Clarity.

LEGEND:

DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

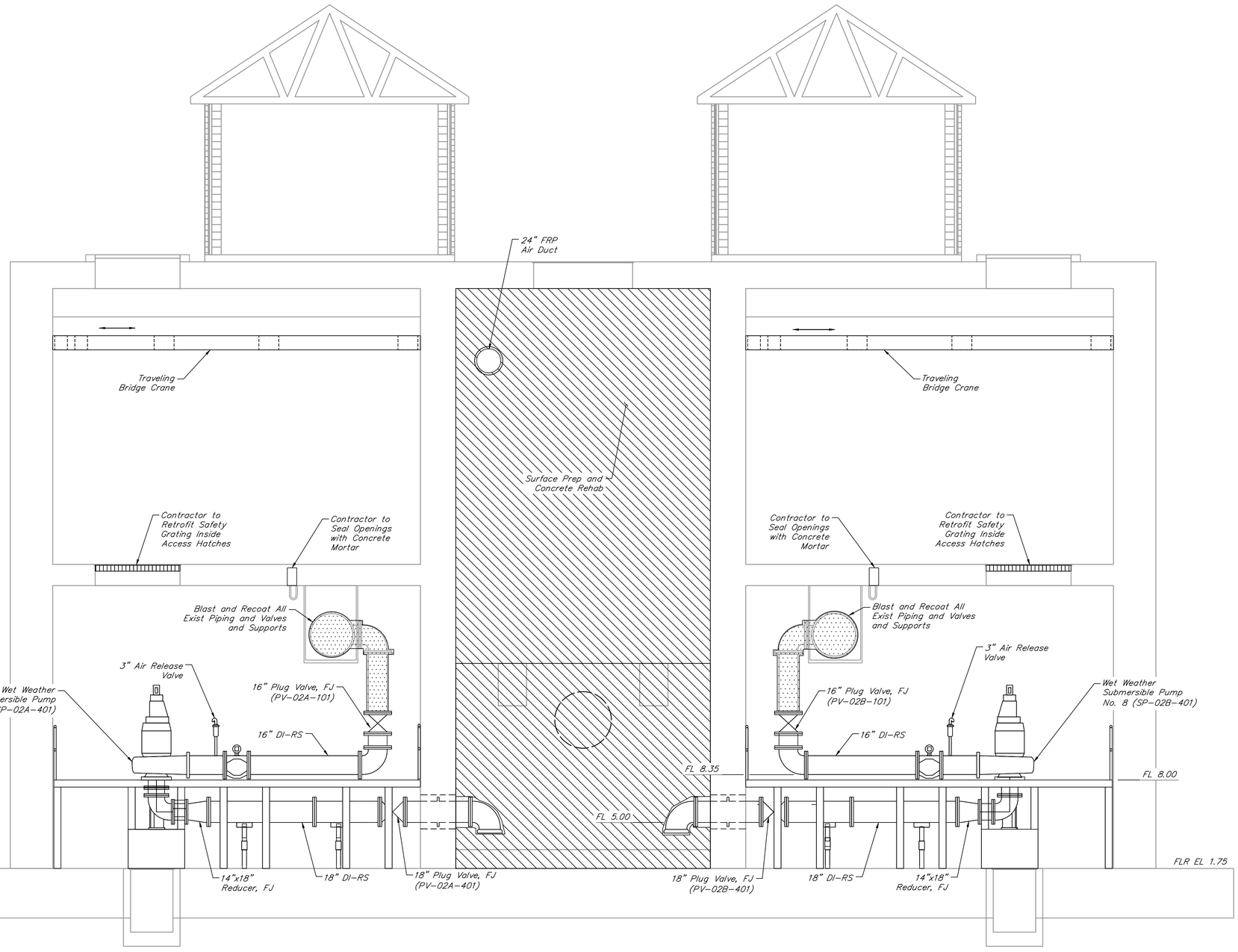
SCOTT STREET No. 1
LIFT STATION REHABILITATION

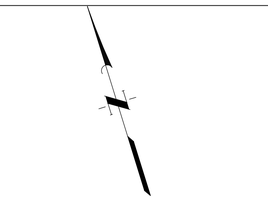
WET WEATHER LIFT STATION EAST SECTION – DEMOLITION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-20 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





LEGEND:

RECOAT

HYDROBLAST

NOTES:

1. All proposed valves shall be installed with position indicator.
2. Contractor shall apply protective coating to all proposed wet well piping
3. All proposed grating and handrails shall be made of aluminum and coated in powder-coated dark green.
4. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

QUIDDITY

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 DWG BY: DTODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION LOWER LEVEL-PROPOSED

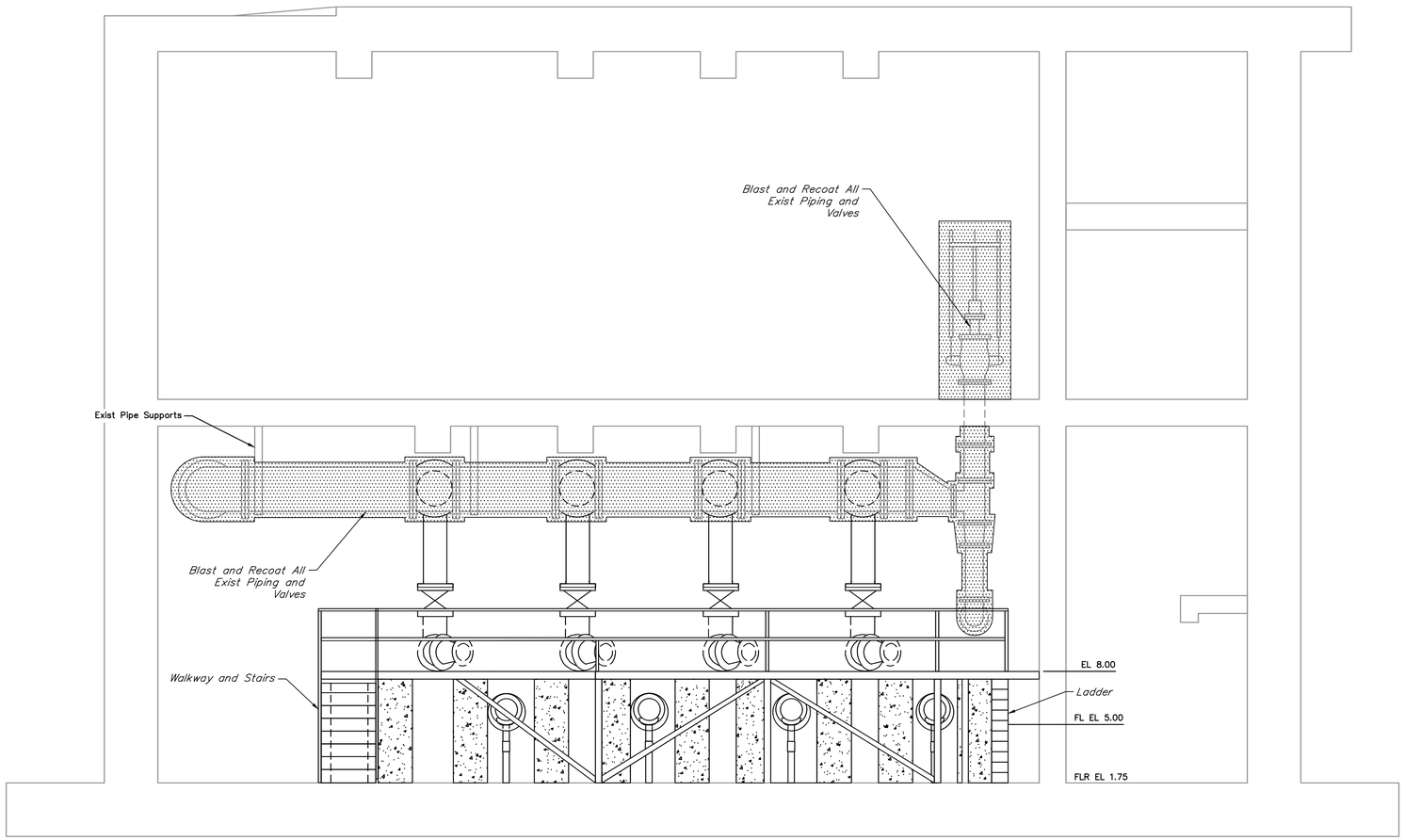
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

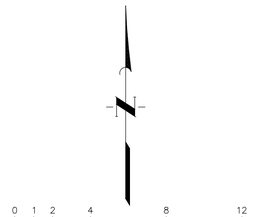
DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-21 SHEET NO. 58 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





LEGEND:

RECOAT

NOTES:

1. All proposed valves shall be installed with position indicator.
2. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: JULY 2025

QUIDDITY
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION MEZZANINE LEVEL–PROPOSED

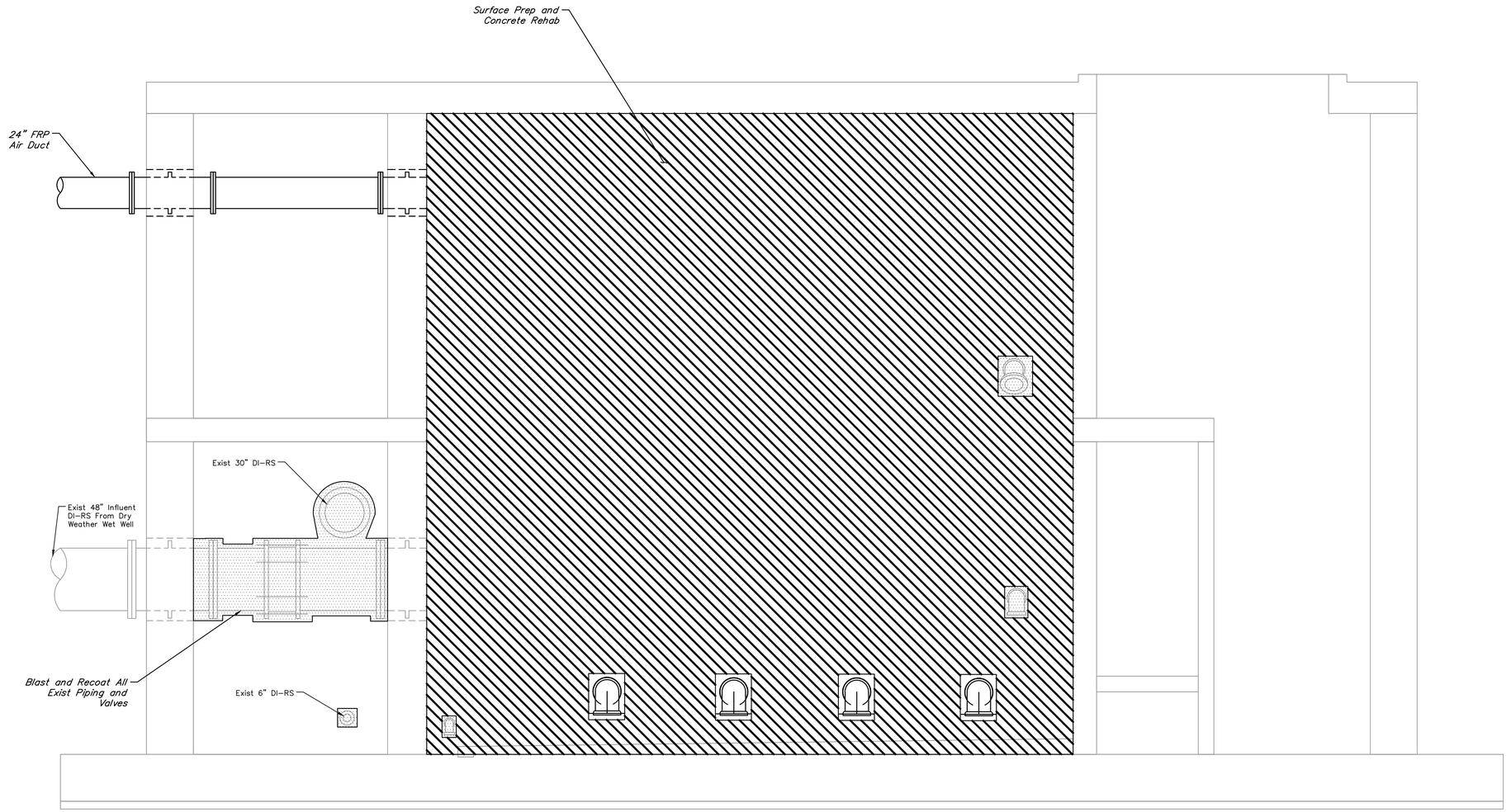
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

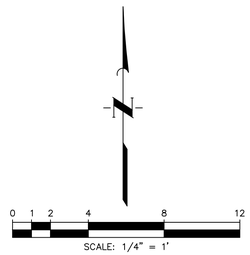
DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-22 SHEET NO. 59 OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





NOTES:

1. Interior Excluded for Clarity.

LEGEND:

RECOAT

HYDROBLAST

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: WILLIAM R. SAGASTIZADO, P.E.

P.E. Serial No.: 125999

Date: APRIL 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
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NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION PROPOSED

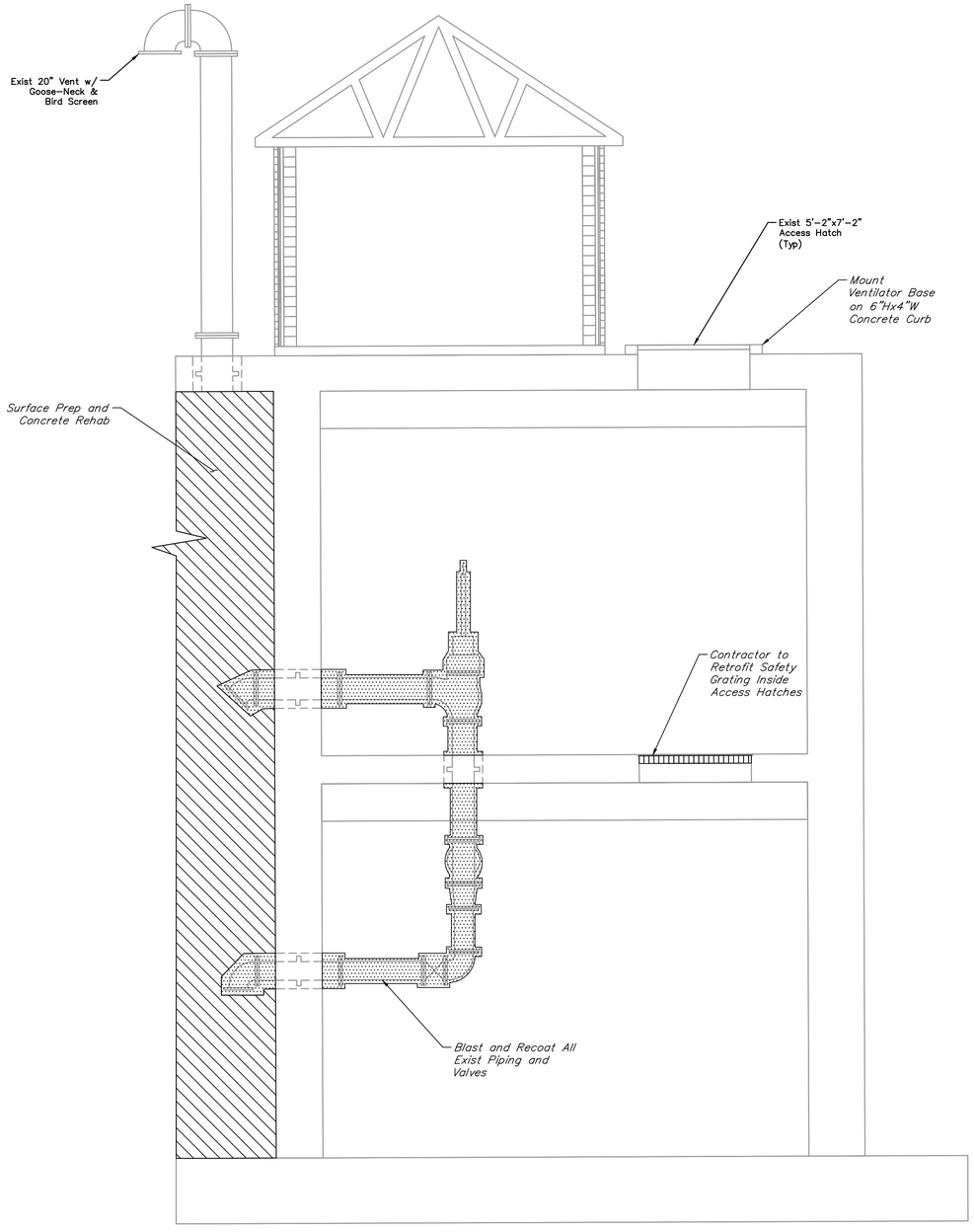
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

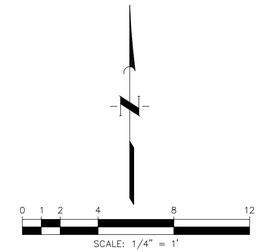
DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-23 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





LEGEND:

RECOAT

HYDROBLAST

NOTES:

1. Exterior Excluded for Clarity.
2. All proposed valves shall be installed with position indicator.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E
P.E. Serial No.: 125999
Date: JULY 2025

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION
EAST SECTION – PROPOSED

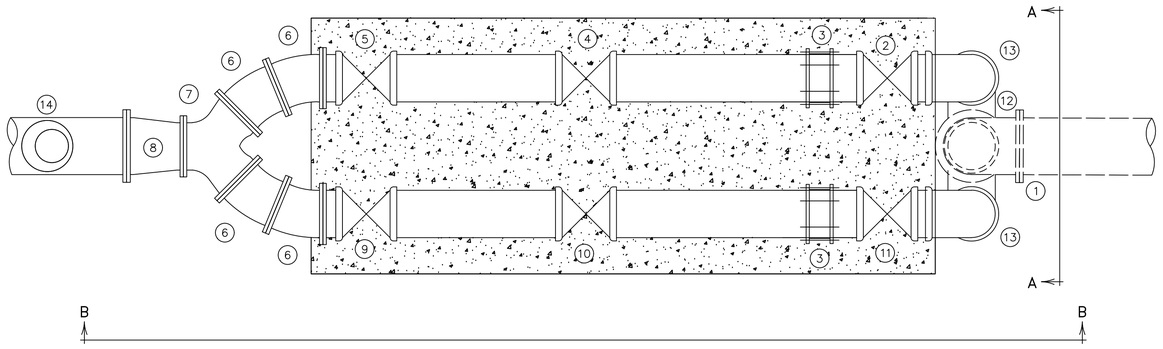
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-24 SHEET NO. XXX OF XXX

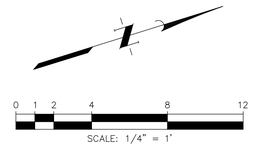
FOR CITY OF HOUSTON USE ONLY

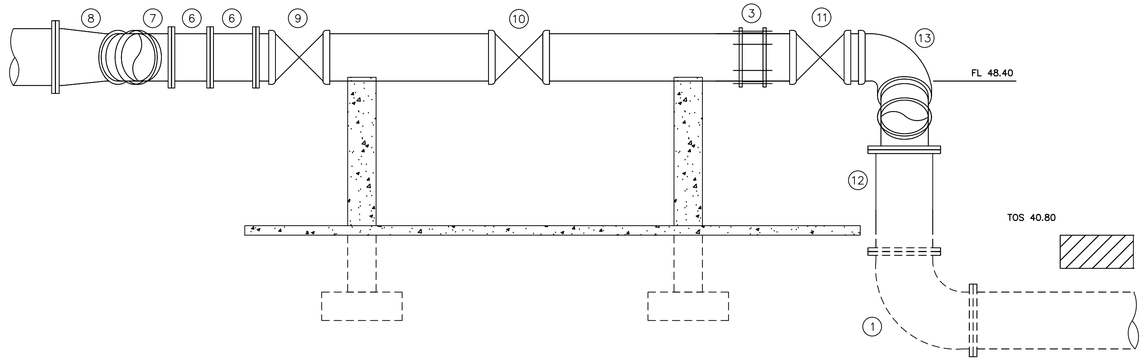
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



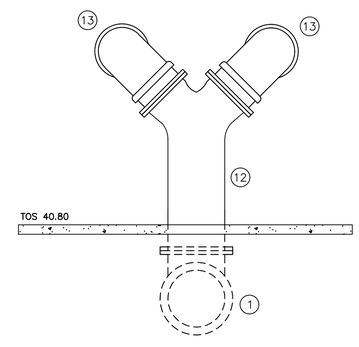
PLAN VIEW
SCALE: 1/4"=1'-0"

VALVE AND ACCESSORIES SCHEDULES	
No.	DESCRIPTION
1	36" 90° Bend, FJ
2	30" Knife Gate Valve, FJ
3	30" Flange Couple Adaptor, FJ
4	30" Flow Control Valve, FJ
5	30" Gate Valve, FJ
6	30" 22.5° Bend, FJ
7	30" Wye Connection, FJ
8	30"x36" Expansion, FJ
9	30" Gate Valve, FJ
10	30" Flow Control Valve, FJ
11	30" Knife Gate Valve, FJ
12	36" Wye Connection, FJ
13	36" x 30" Reducer 90° Bend, FJ
14	36" Flow Meter





SECTION VIEW B-B
SCALE: 1/4"=1'-0"



SECTION VIEW A-A
SCALE: 1/4"=1'-0"

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: DTODD

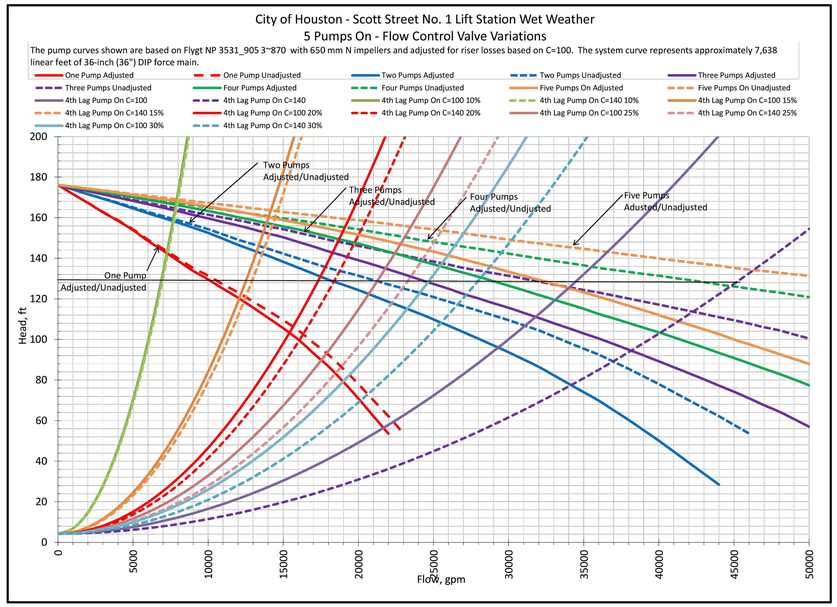
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

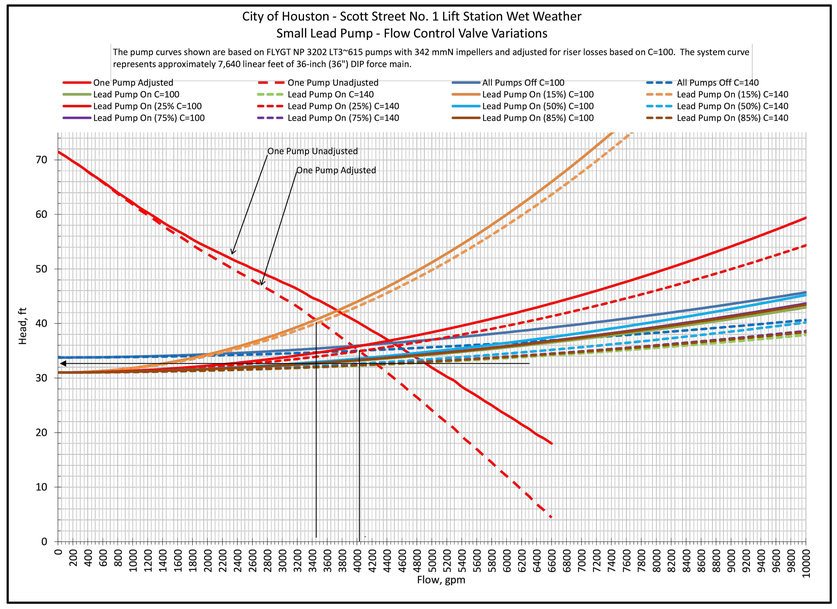
SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION
FLOW METER STATION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-25 SHEET NO. 62 OF XXX
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NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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P.E. Serial No.: 125999

Date: JUNE 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 DGN BY: EMMARTINEZ
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SCOTT STREET No. 1
LIFT STATION REHABILITATION

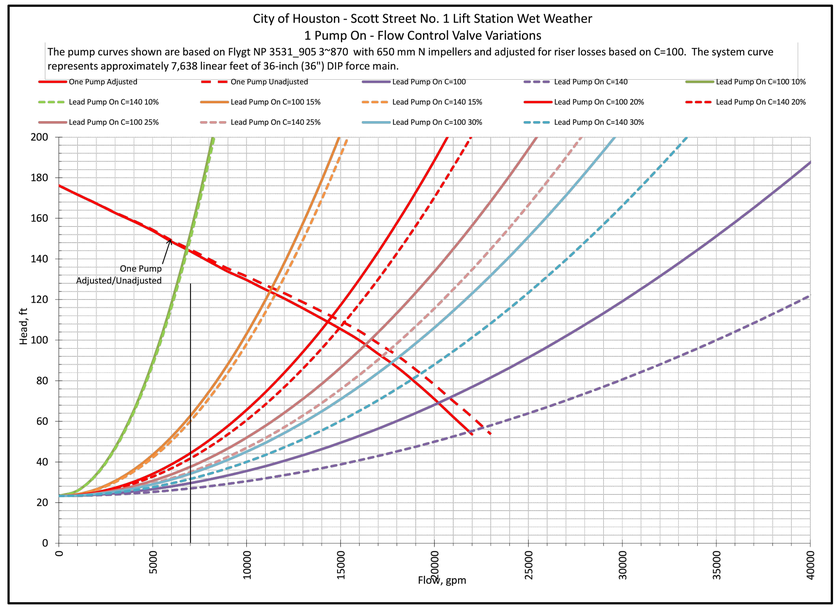
WET WEATHER PUMP STATION PUMP DATA AND CURVES SHEET 2 OF 3

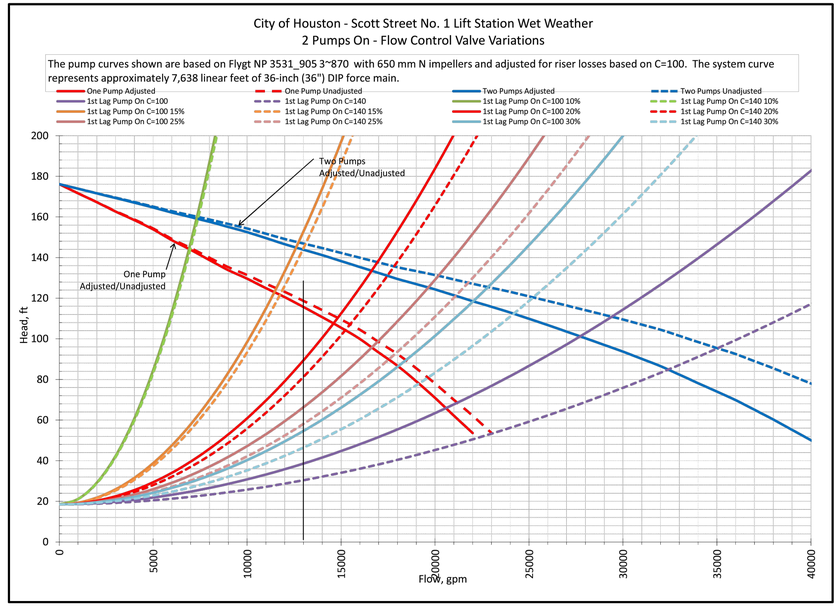
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

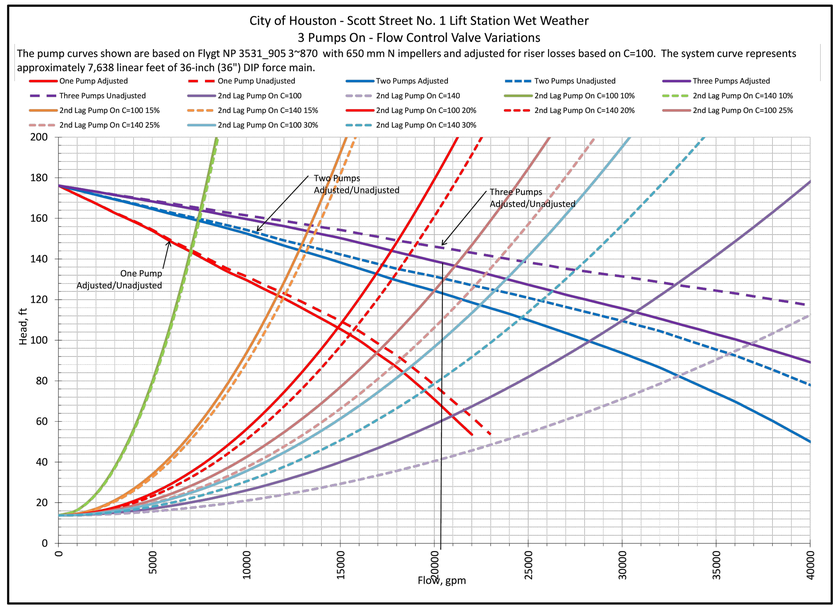
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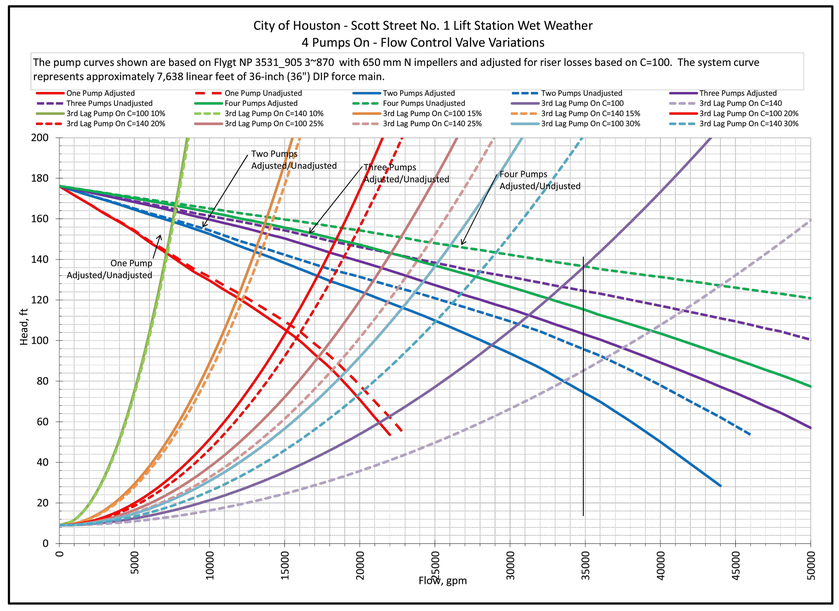
CATEGORY NO. 2-M-27 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY









NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JUNE 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025
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DGN BY: EMMARTINEZ
DWG BY: DTODD

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER PUMP STATION PUMP DATA AND CURVES SHEET 1 OF 3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-26 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

PUMP DATA TABLE

PUMP DATA	PUMP No. 1	PUMP No. 2	PUMP No. 3	PUMP No. 4	PUMP No. 5	PUMP No. 6	PUMP No. 7	PUMP No. 8
FLOW (GPM)	34,722	34,722	34,722	34,722	34,722	34,722	4,167	4,167
TDH (FT.)	147.11	147.11	147.11	147.11	147.11	147.11	38.8	38.8
MIN. OVERALL EFF. (%)	60%	60%	60%	60%	60%	60%	60%	60%
STATIC HEAD (FT.)	23.27	23.27	23.27	23.27	23.27	23.27	31.02	31.02
SHAFT HP (MAX.)	525	525	525	525	525	525	50	50
RPM (MAX.)	905	905	905	905	905	905	1,175	1,175

LIFT STATION OPERATION TABLE

RISING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
16.26	LEAD PUMP TURNS ON	LEAD PUMP TURNS ON
21.01	1ST LAG PUMP TURNS ON	LEAD AND 1ST LAG PUMP TURNS ON
25.77	2ND LAG PUMP TURNS ON	LEAD AND TWO LAG PUMPS TURN ON
30.54	3RD LAG PUMP TURNS ON	LEAD AND THREE LAG PUMPS TURN ON
35.30	4TH LAG PUMP TURNS ON	ALL PUMPS ON
FALLING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
35.04	4TH LAG PUMP TURNS OFF	
30.26	3RD LAG PUMP TURNS OFF	
25.51	2ND LAG PUMP TURNS OFF	
20.75	1ST LAG PUMP TURNS OFF	LEAD AND 1ST LAG PUMP TURNS ON
16.00	LEAD PUMP TURNS OFF	ALL PUMPS OFF

NO.	DATE	REVISIONS	APP.

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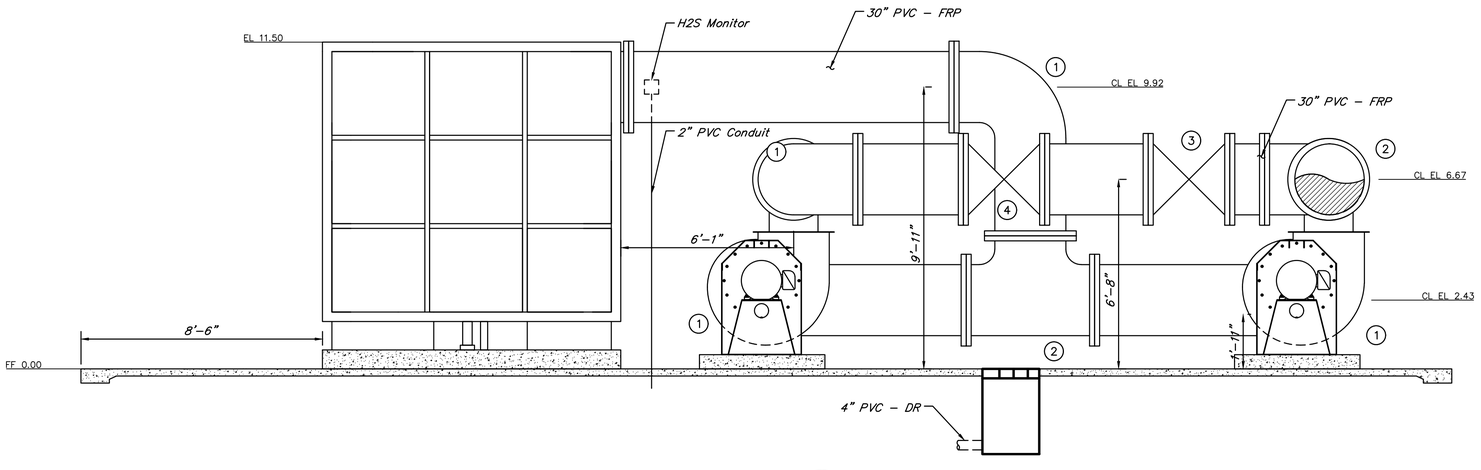
SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER PUMP STATION PUMP DATA AND CURVES SHEET 3 OF 3

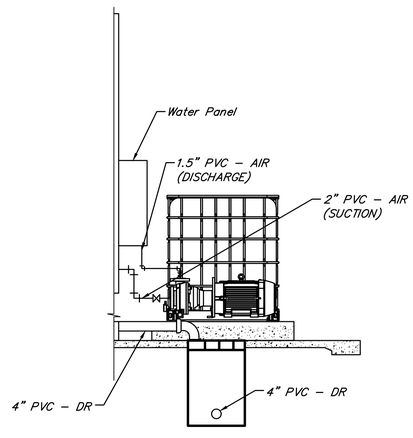
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX
CATEGORY NO. 2-M-25 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

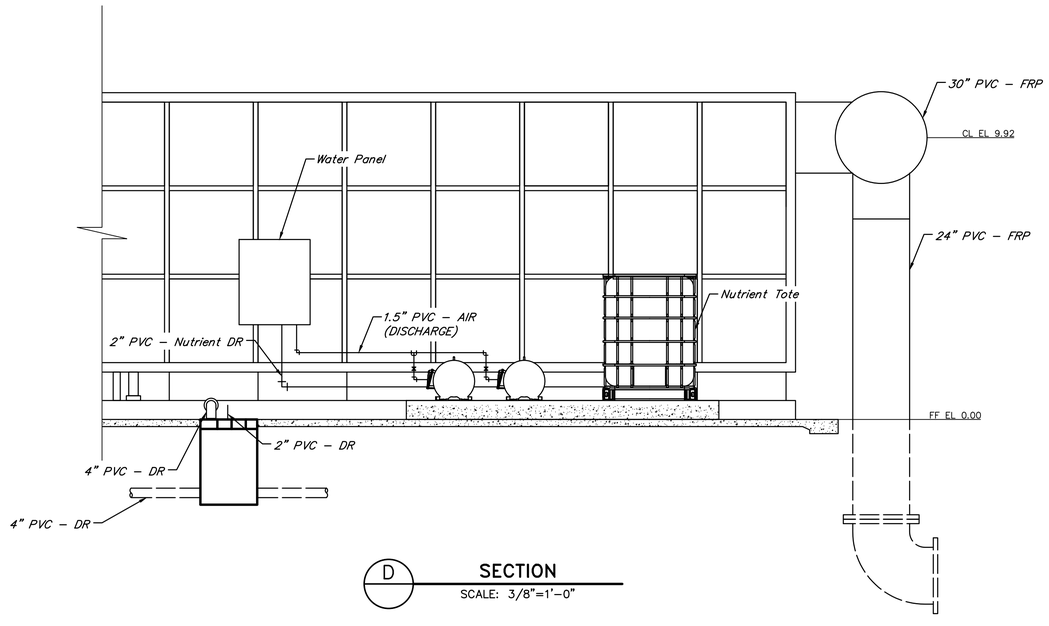
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



C SECTION
SCALE: 3/8"=1'–0"



E SECTION
SCALE: 3/8"=1'–0"



D SECTION
SCALE: 3/8"=1'–0"

0 1 2 3 6
SCALE: 3/8"=1'

VALVE AND ACCESSORIES SCHEDULES

No.	DESCRIPTION
1	30" 90° Bend, FJ
2	30" TEE, FJ
3	30" Butterfly Valve, FJ
4	30" Butterfly Valve, FJ

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JUNE 2025

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CITY OF HOUSTON
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SCOTT STREET No. 1
LIFT STATION REHABILITATION

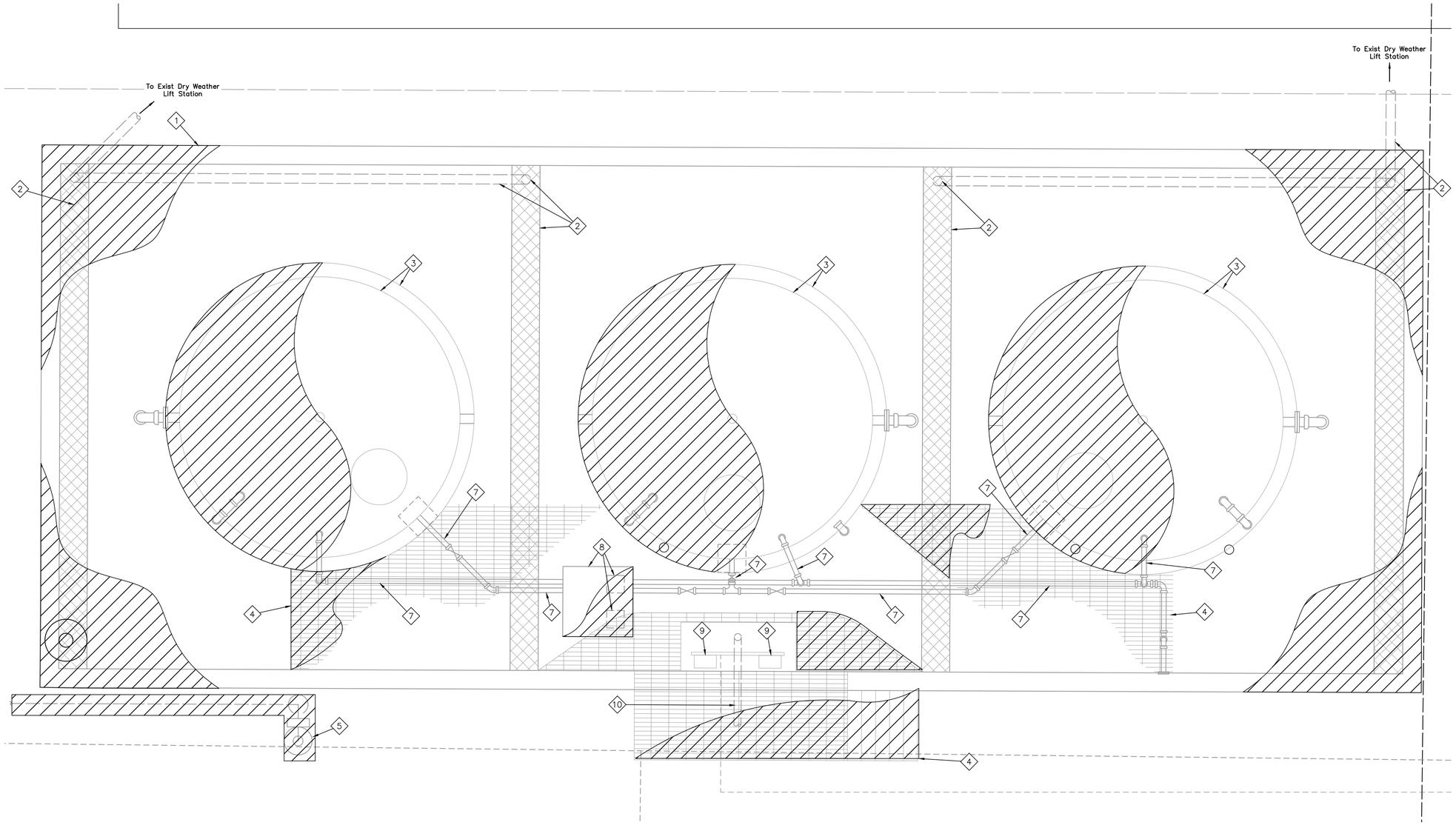
ODOR CONTROL SYSTEM PROPOSED SECTION SHEET 2 OF 2

CITY OF HOUSTON
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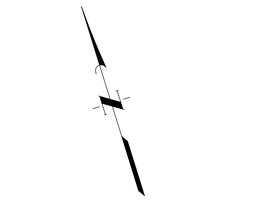
DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. X–M–X SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050–0099–01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MECH–5.dwg, 6/12/2025 3:21:02 PM, josanchez

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ITEMS OF WORK			
No.	DESCRIPTION	No.	DESCRIPTION
1	Demolish the existing concrete containment walls and foundation.	6	Demolish the existing 1-1/4" PW-PVC line.
2	Demolish the existing floor trench, grating, and drain lines.	7	Demolish all above ground piping, fittings, valves, supports, and miscellaneous items within the chemical containment area.
3	Demolish the existing ferrous sulfate chemical storage tanks and tank pedestals.	8	Demolish the existing chemical feed pumps, piping, fittings and valves within the FRP Building.
4	Demolish the existing fabricated steel grating, stairs, and framing.	9	Demolish the existing chemical system control panels and electrical conduits.
5	Demolish the existing emergency eye wash and shower station.	10	Pull and demolish the existing chemical tubing within chemical carrier pipe (from Process Area 3 to Process Area 1) and demolish the existing chemical carrier pipe.



LEGEND:

DEMOLISH

NOTES:

1. Demolition and disposal of the existing chemical system must be done in accordance to local, state, and federal regulations.
2. The existing demolition plans are based from the City of Houston's record drawings. Actual existing conditions may differ than what is on the field. Contractor shall field verify the existing conditions and dimensions for accuracy.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: HARRY W. ISENSEE III, P.E.

P.E. Serial No.: 144401

Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL FEED SYSTEM DEMOLITION PLAN

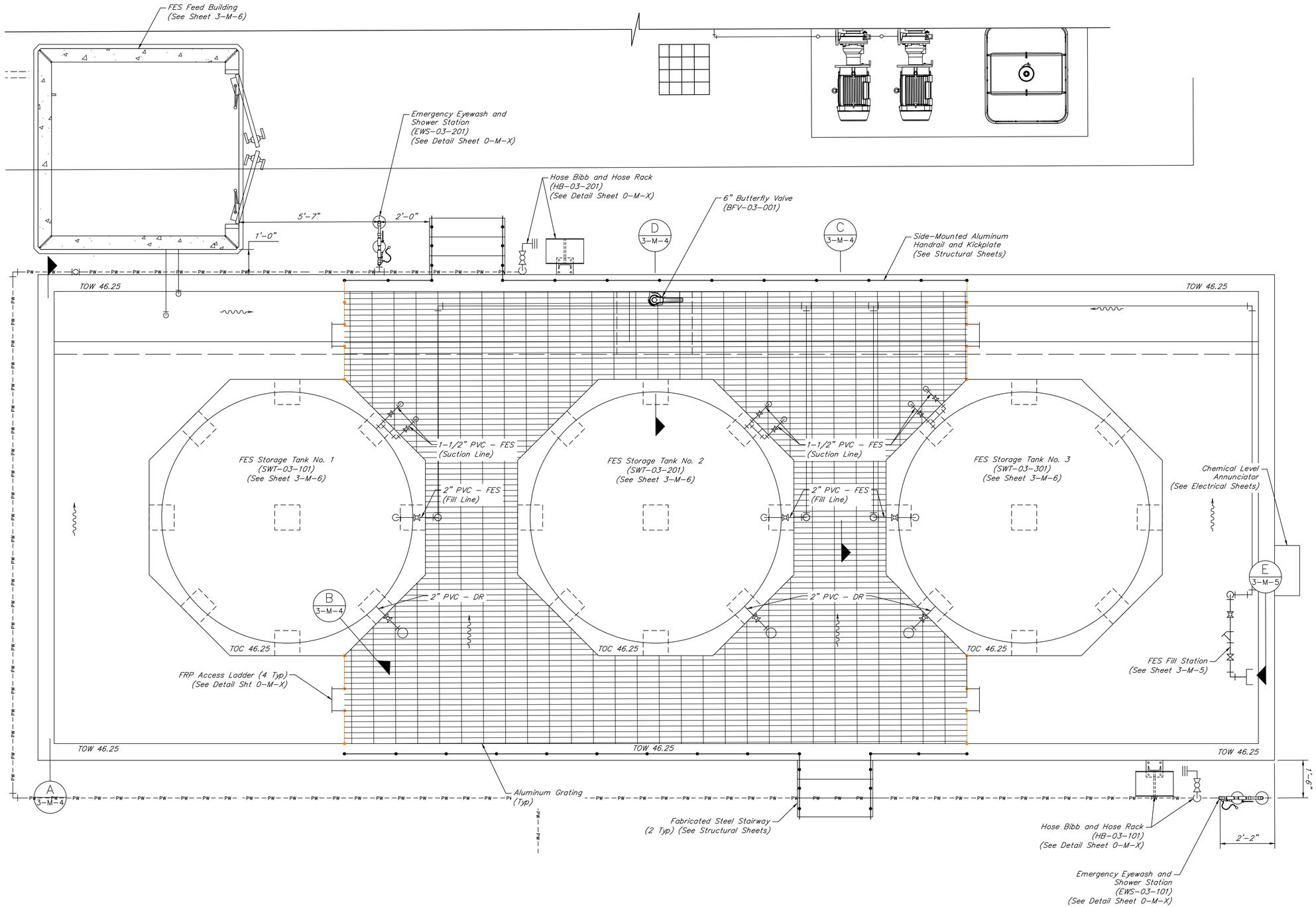
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. 3-M-1 SHEET NO. XXX OF XXX

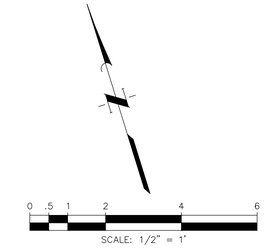
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



CHEMICAL SYSTEM PROPOSED UPPER PLAN EL 46.25

SCALE: 1/2" = 1'-0"



NOTES:

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
3. Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL STORAGE AND CONTAINMENT UPPER PLAN

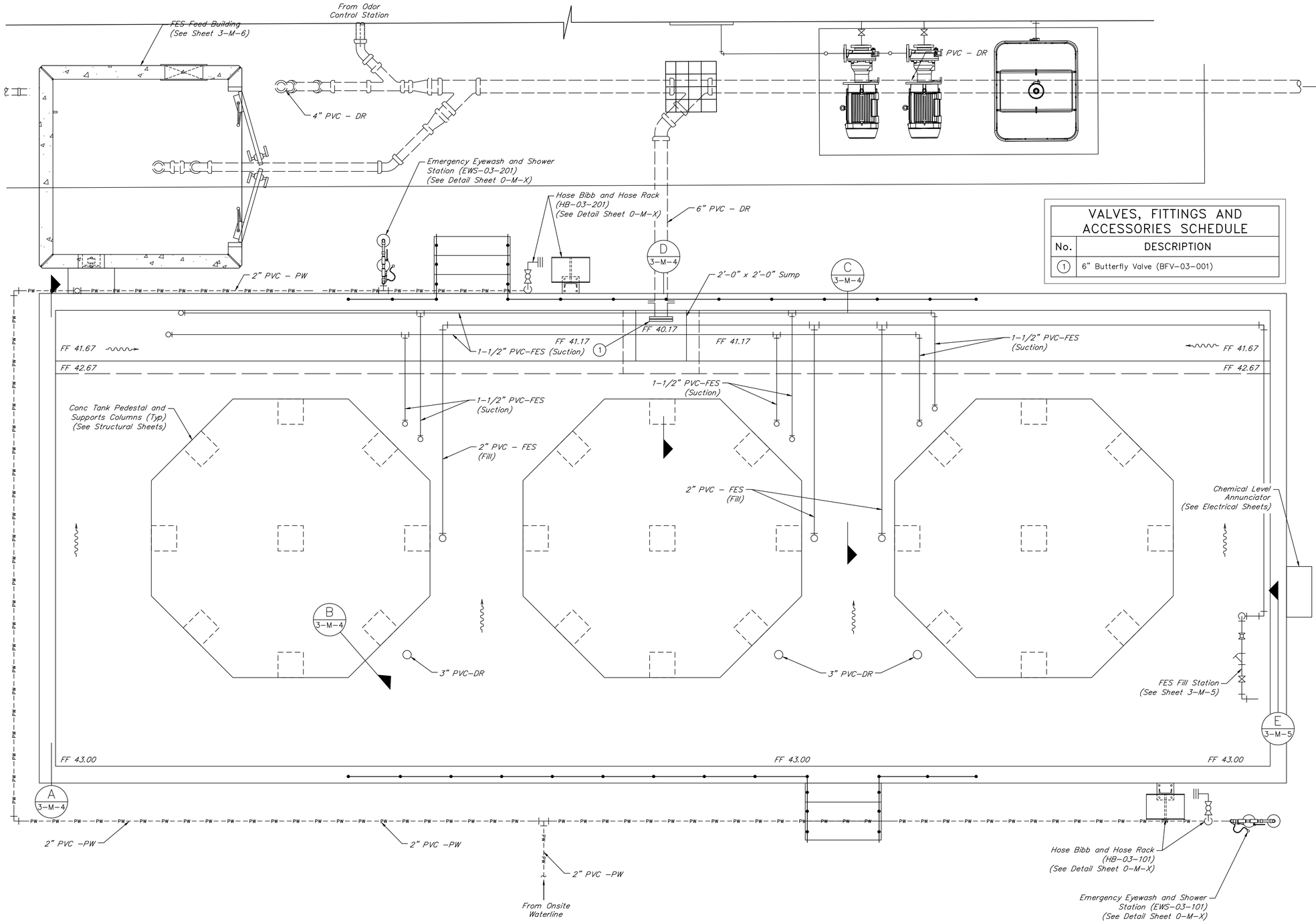
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. 3-M-2 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

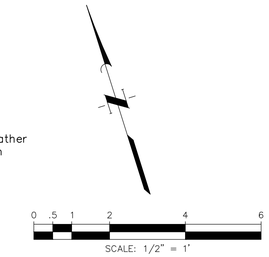
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



CHEMICAL SYSTEM PROPOSED LOWER PLAN EL 44.50

SCALE: 1/2" = 1'-0"

VALVES, FITTINGS AND ACCESSORIES SCHEDULE	
No.	DESCRIPTION
1	6" Butterfly Valve (BFV-03-001)



NOTES:

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
3. Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL STORAGE AND CONTAINMENT LOWER PLAN

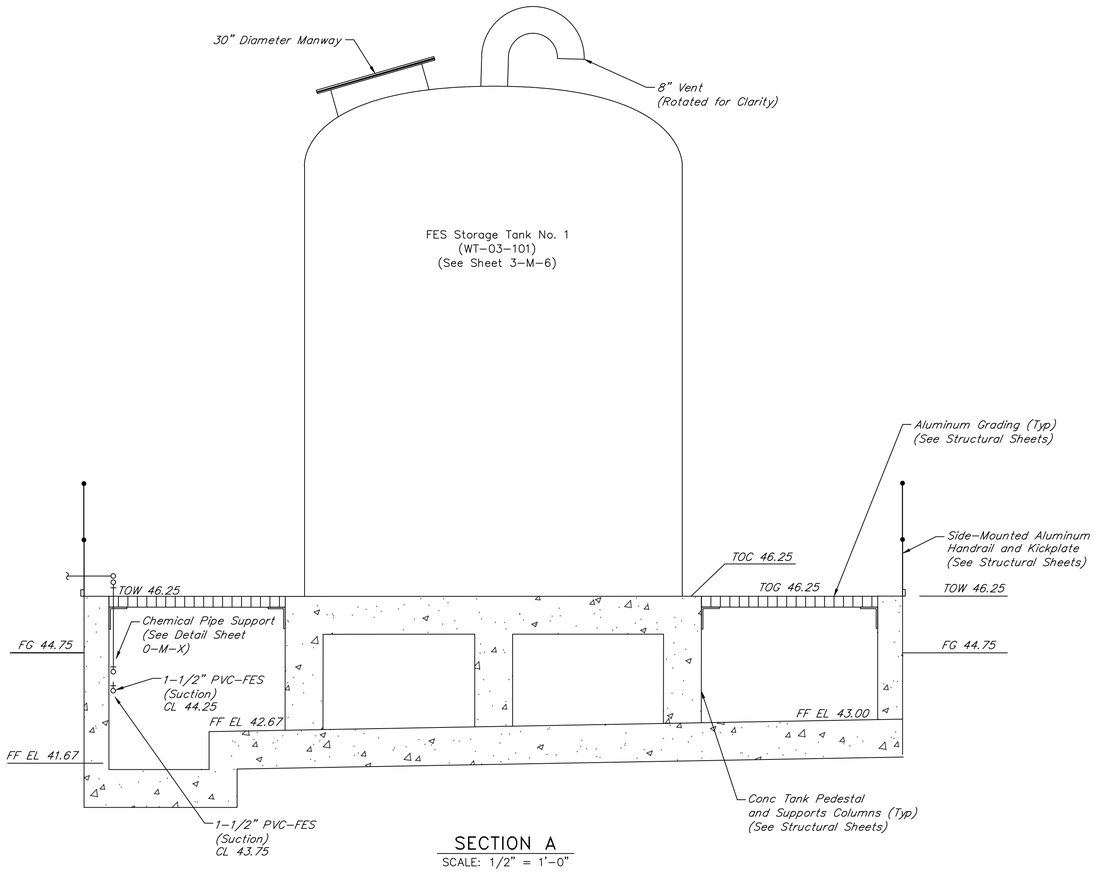
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

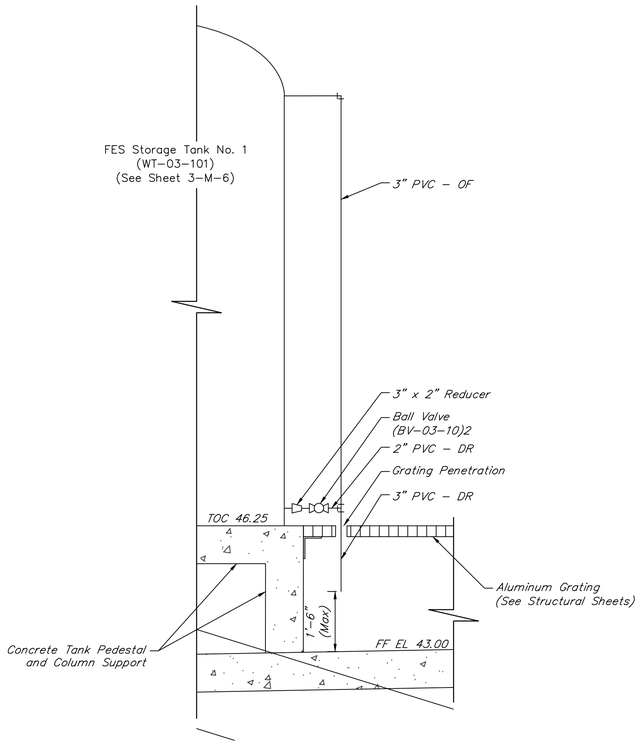
CATEGORY NO. 3-M-3 SHEET NO. XXX OF XXX

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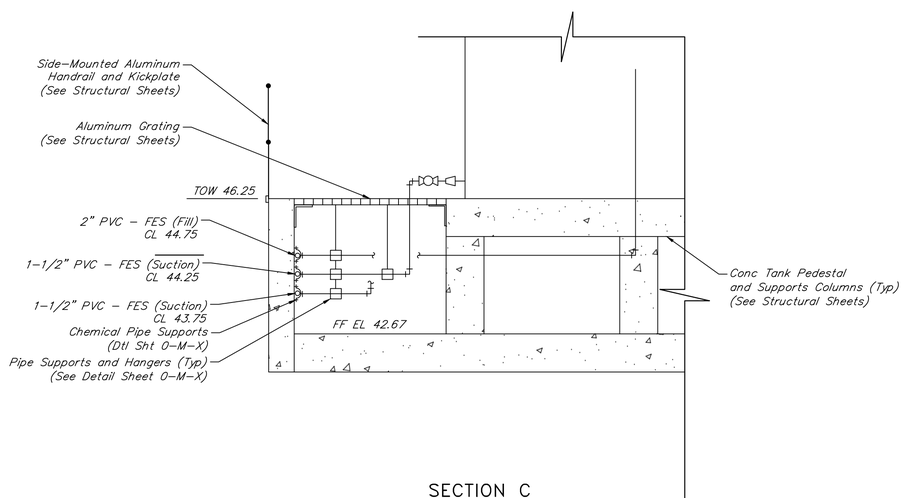
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



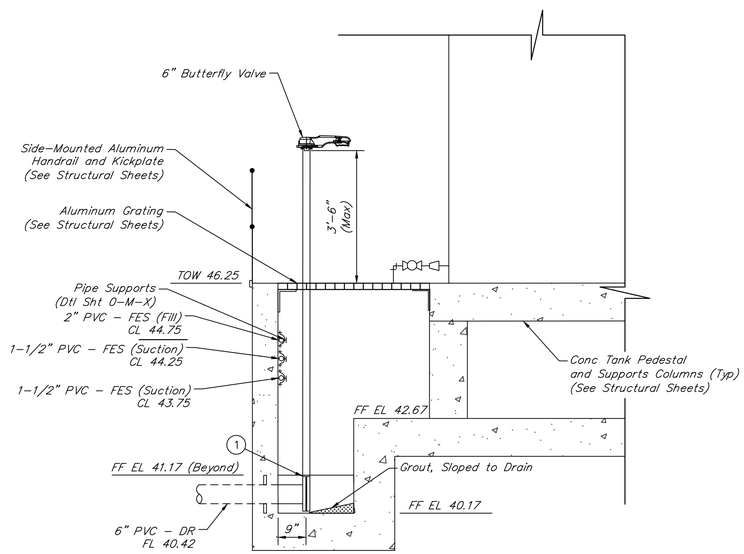
SECTION A
SCALE: 1/2" = 1'-0"



SECTION B
SCALE: 1/2" = 1'-0"



SECTION C
SCALE: 1/2" = 1'-0"



SECTION D
SCALE: 1/2" = 1'-0"

VALVES, FITTINGS AND ACCESSORIES SCHEDULE

No.	DESCRIPTION
1	6" Butterfly Valve (BFV-03-001) (See Note 4)

NOTES:

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
3. Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".
4. Install thermoplastic butterfly valves with extended lever operator. Attach valve to 6" PVC-DR line with 6" PVC solvent welded flange adapter. Notch grating for the valve stem.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
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Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JULY 2025

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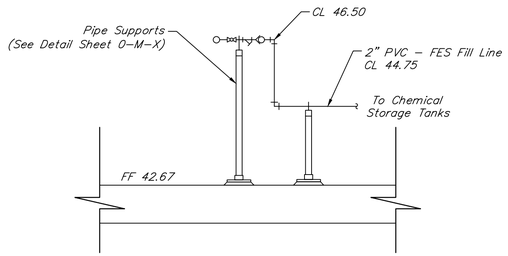
SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL FEED SYSTEM PROPOSED SECTION SHEET 1 OF 2

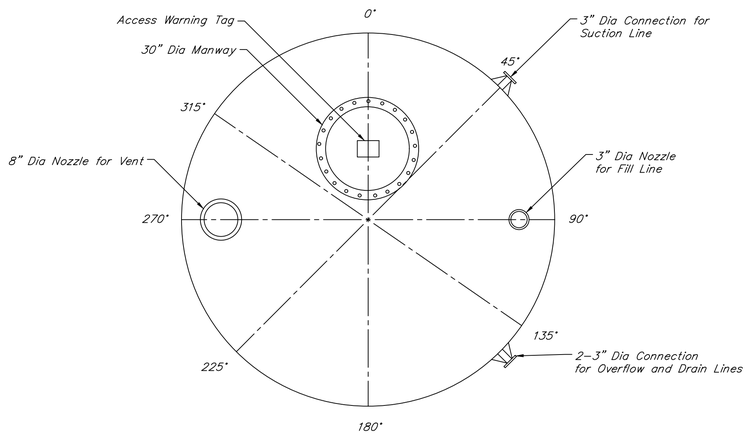
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. 3-M-4 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

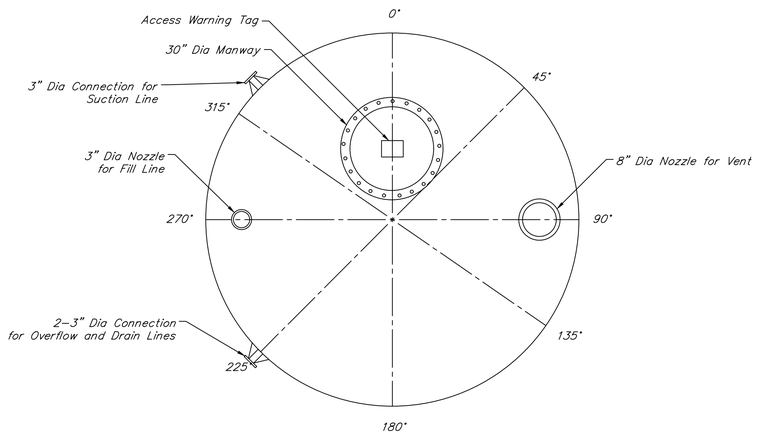
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



SECTION E
SCALE: 1/2" = 1'-0"



FERROUS SULFATE STORAGE TANK Nos. 1 & 2 TOP VIEW - TRUE ORIENTATION
NOT TO SCALE



FERROUS SULFATE STORAGE TANK No. 3 TOP VIEW - TRUE ORIENTATION
NOT TO SCALE

NOTES:

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Mount all small diameter piping to wall with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050-0099-01 | DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

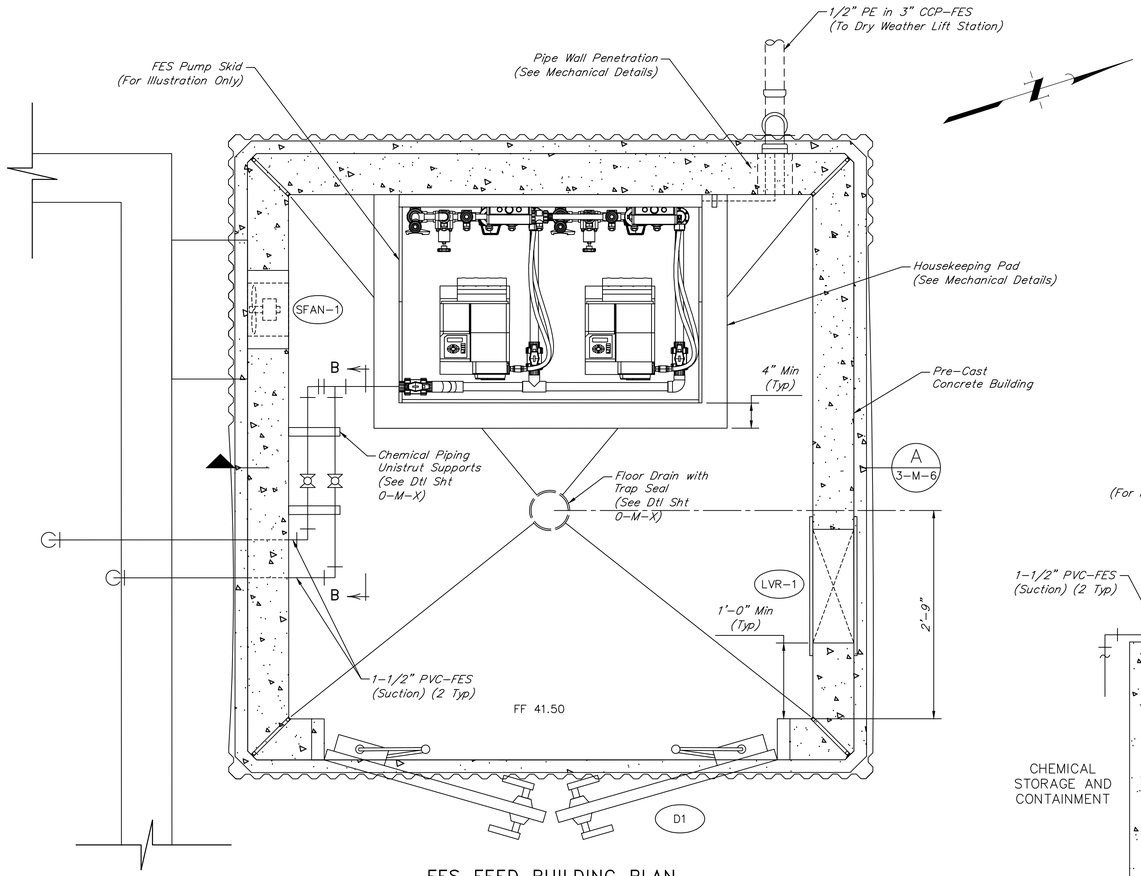
SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL TANK DETAILS

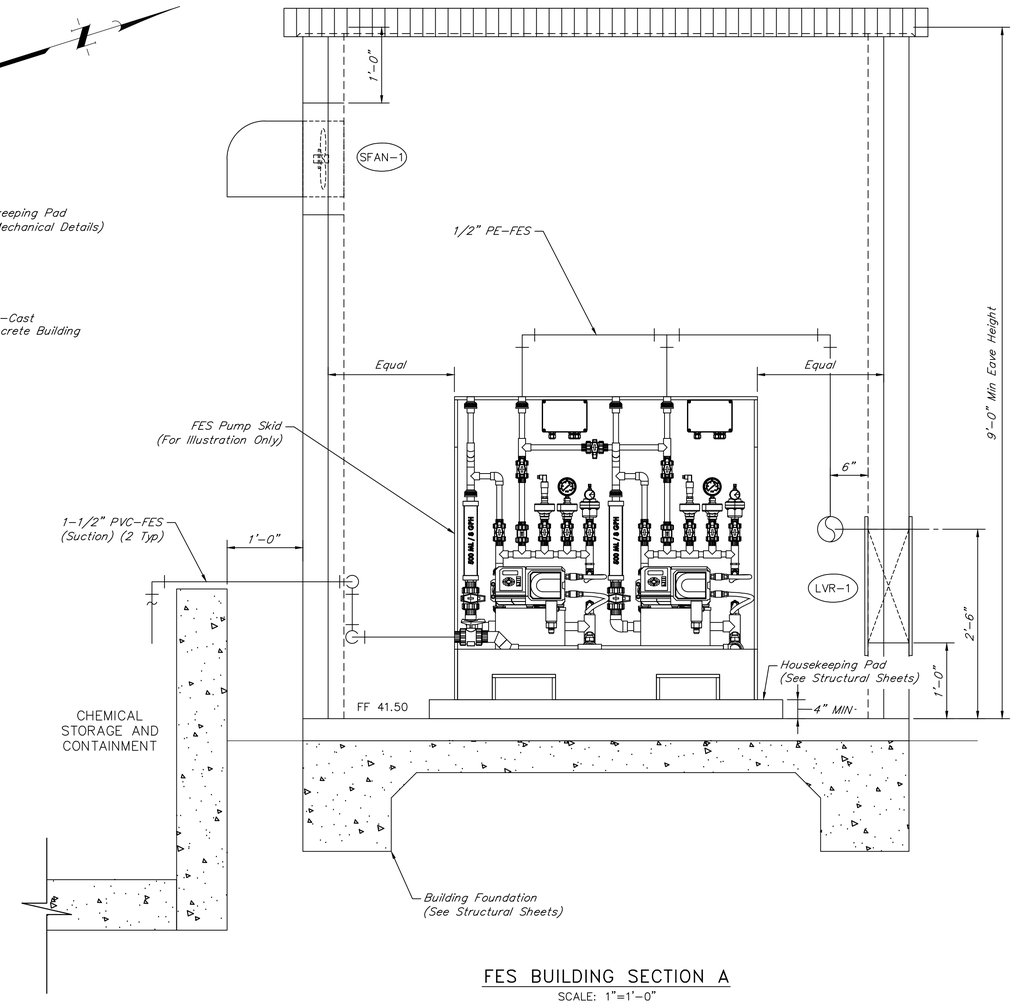
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX
CATEGORY NO. 3-M-5 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

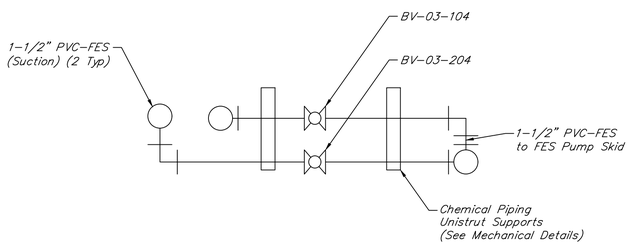
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



FES FEED BUILDING PLAN
SCALE: 1"=1'-0"



FES BUILDING SECTION A
SCALE: 1"=1'-0"



SECTION B-B
NOT TO SCALE

DOOR SCHEDULE

ID NO	BUILDING	DOOR DESCRIPTION						FRAME		REMARKS
		TYPE	WIDTH	HEIGHT	THICK	MAT'L	FINISH	MAT'L	FINISH	
(D1)	FES	DOUBLE	6'-0"	7'-0"	1'-3/4"	FRP	PAINT	FRP	GELCOAT	NOTES #1, 2, 3

DOOR NOTES:
1. Provide weatherstripping.
2. Provide padlock.
3. Provide windspeed rating for 110 mph with 3-second gusts.

FAN SCHEDULE

ID NO	LOCATION	MIN FLOW (CFM)	STATIC PRESSURE IN WC (IN)	BLADE DIA	MANUFACTURER /MODEL	MOUNTING		NOTES
						TYPE	LOCATION	
SFAN-1	FES FEED BUILDING	246	0.25	10"	DAYTON/1BLH6	WALL	HIGH	#1, 2, 3, 4, 5, 6, 7

FAN NOTES:
1. Provide disconnect switch.
2. Provide birdscreen.
3. Provide backdraft dampers.
4. Provide weather hood.
5. Provide factory mounted brackets and hanging kit.
6. Provide FRP material.
7. Interlock with local switch.

LOUVER SCHEDULE

ID NO	LOCATION	SERVICE	MIN SHUTTER FREE AREA (SF)	SIZE (IN)	MANUFACTURER /MODEL	MOUNTING		REMARKS
						TYPE	LOCATION	
LVR-1	FES FEED BUILDING	SUPPLY	0.4	12	DAYTON 805TT9	WALL	LOW	NOTES #1, 2

LOUVER NOTES:
1. Provide birdscreen.
2. Provide FRP material.

NOTES:

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Mount all small diameter piping to wall with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY:
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

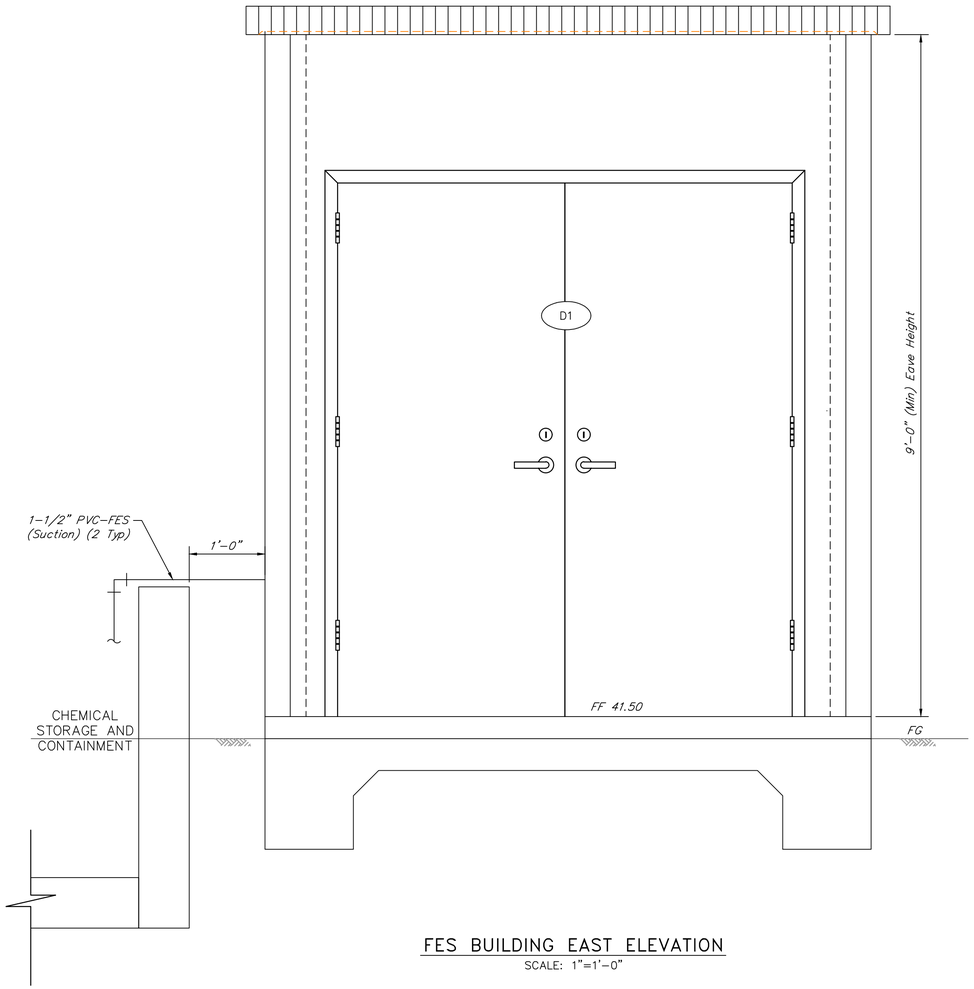
SCOTT STREET No. 1
LIFT STATION REHABILITATION

FES FEED BUILDING PLAN AND SECTIONS SHEET 1 OF 2

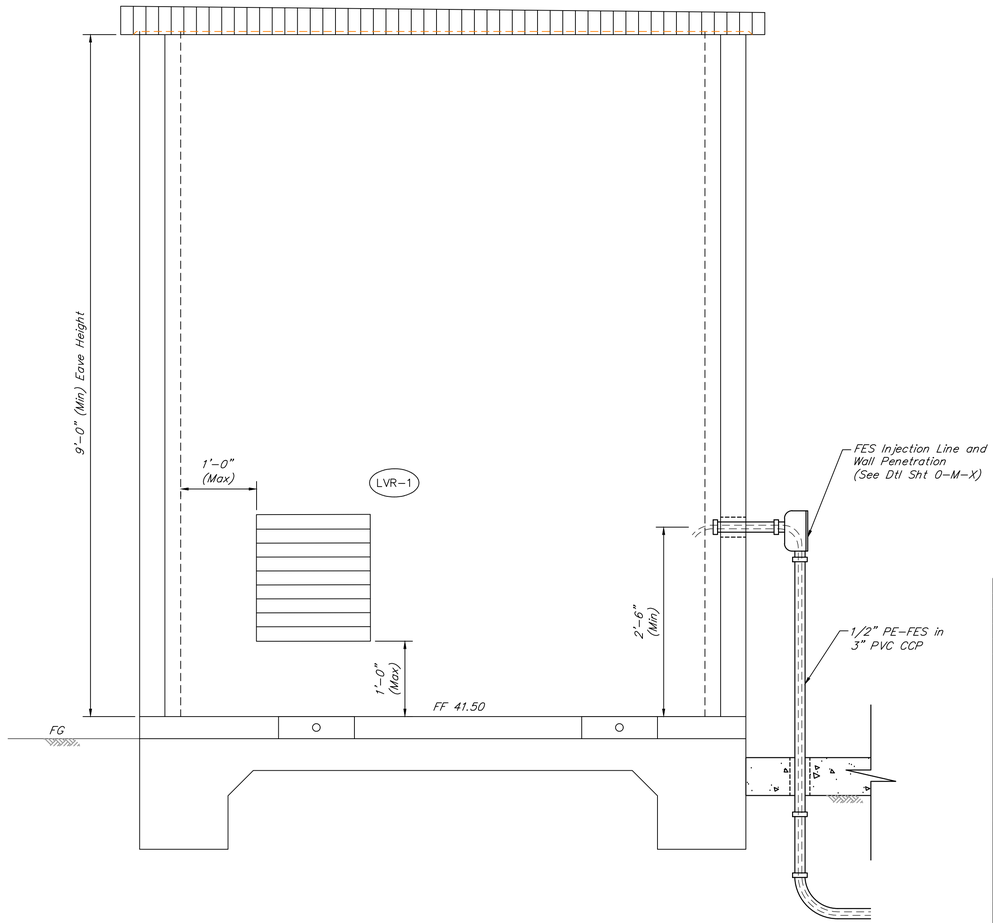
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 3-M-6 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



FES BUILDING EAST ELEVATION
SCALE: 1"=1'-0"



FES BUILDING NORTH ELEVATION
SCALE: 1"=1'-0"

NOTES:

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
3. Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: HARRY W. ISENSEE III, P.E.
P.E. Serial No.: 144401
Date: JULY 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: JBSANCHEZ
JOB NO: 00050-0099-01 DWG BY: CHUDSON

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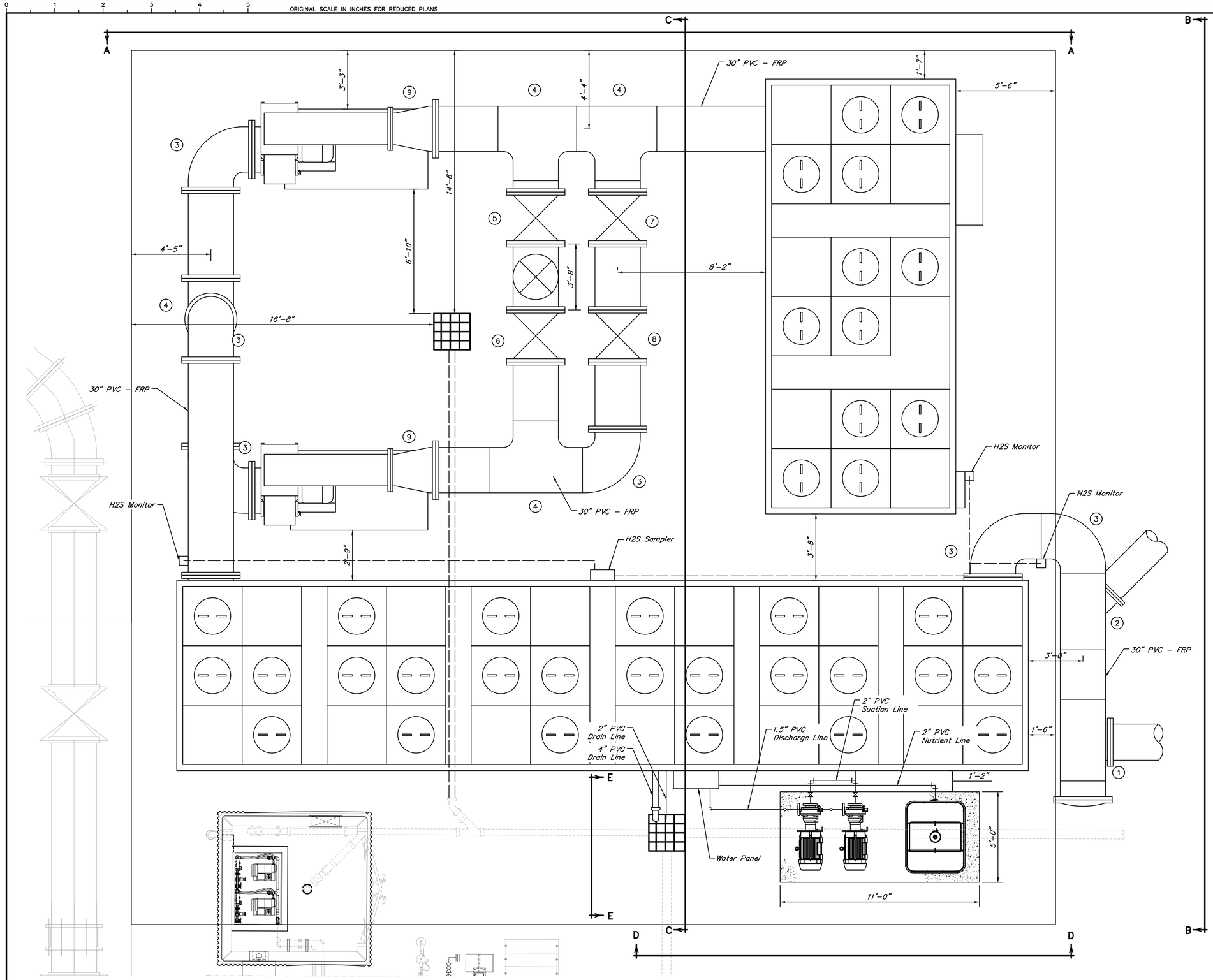
SCOTT STREET No. 1
LIFT STATION REHABILITATION

FES FEED BUILDING PLAN AND SECTIONS
SHEET 2 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. 3-M-7 SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



SCALE: 3/8"=1'

VALVE AND ACCESSORIES SCHEDULES

No.	DESCRIPTION
1	20" 90° Bend, FJ
2	24" 90° Bend, FJ
3	30" 90° Bend, FJ
4	30" TEE, FJ
5	30" Butterfly Valve, FJ
6	30" Butterfly Valve, FJ
7	30" Butterfly Valve, FJ
8	30" Butterfly Valve, FJ
9	(15"x21") Rectangular X 30" Circular Reducer, FJ

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E
P.E. Serial No.: 125999
Date: JUNE 2025

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Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050–0099–01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

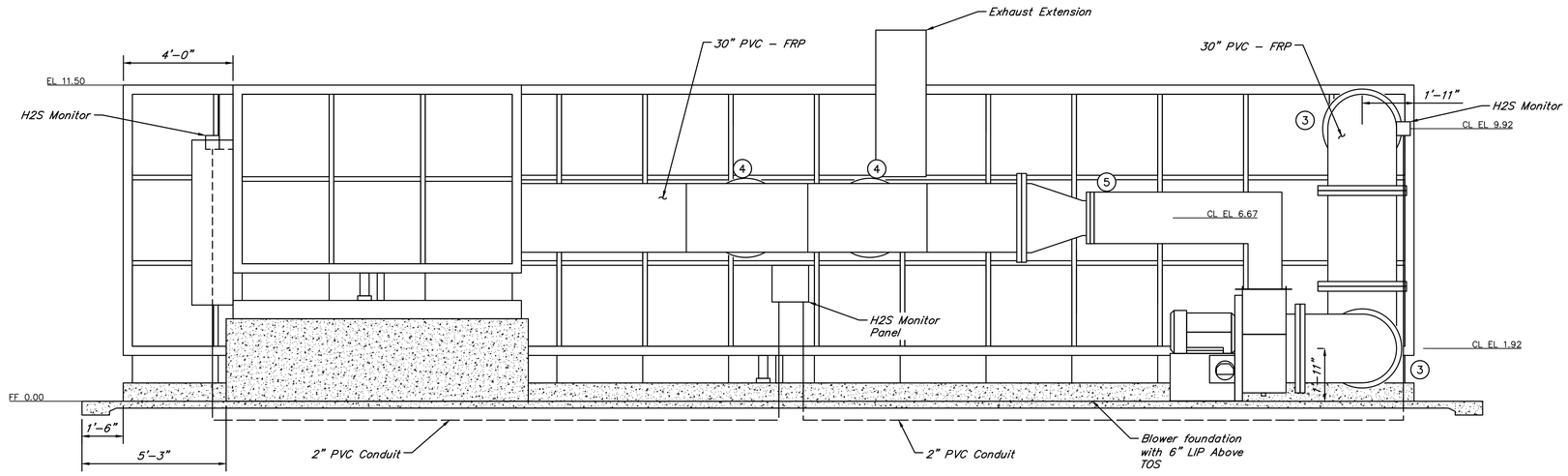
SCOTT STREET No. 1
LIFT STATION REHABILITATION

ODOR CONTROL SYSTEM PROPOSED PLAN

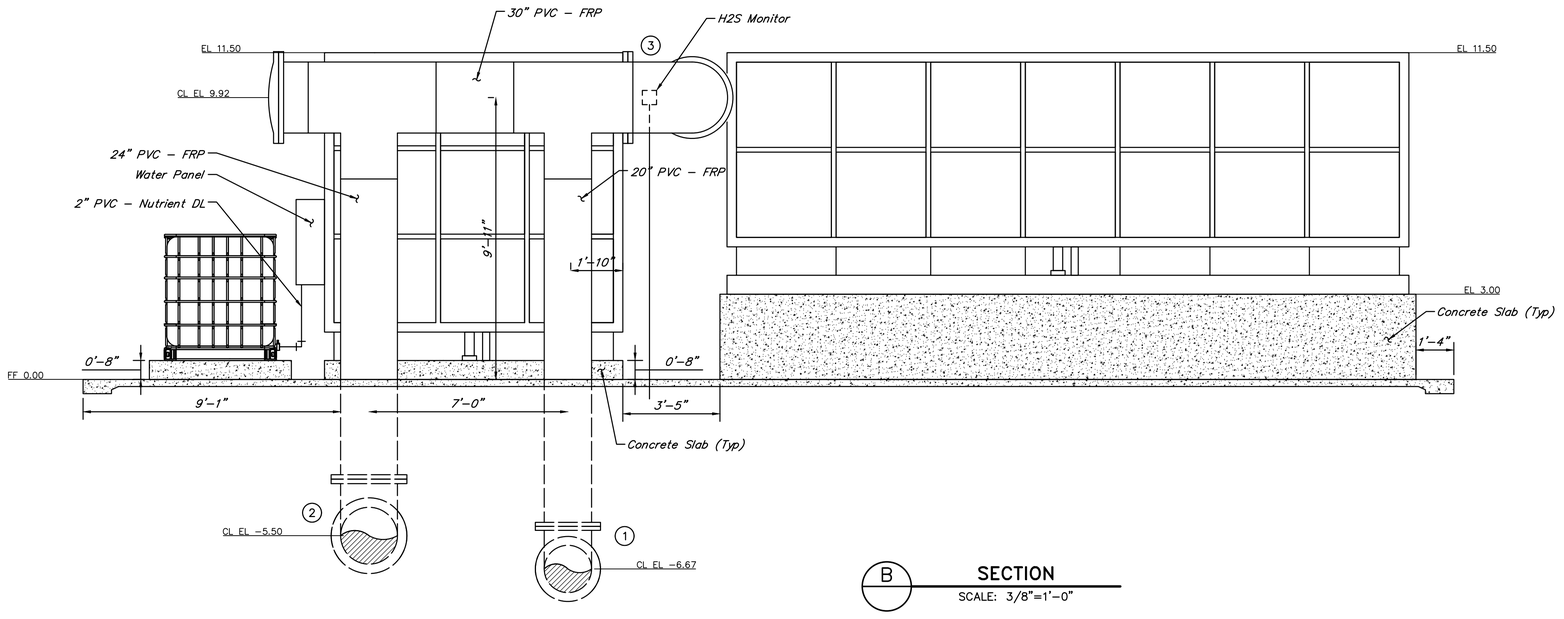
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. X–M–X SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



A **SECTION**
SCALE: 3/8"=1'–0"



B **SECTION**
SCALE: 3/8"=1'–0"

0 1 2 3 6
SCALE: 3/8"=1'

VALVE AND ACCESSORIES SCHEDULES

No.	DESCRIPTION
1	20" 90° Bend, FJ
2	24" 90° Bend, FJ
3	30" 90° Bend, FJ
4	30" TEE, FJ
5	(15"x21") Rectangular X 30" Circular Reducer, FJ

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: WILLIAM R. SAGASTIZADO, P.E.
P.E. Serial No.: 125999
Date: JUNE 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: MARCH 2025 | DGN BY: EMMARTINEZ
JOB NO: 00050–0099–01 | DWG BY: DTDODD

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

ODOR CONTROL SYSTEM
PROPOSED SECTION
SHEET 1 OF 2

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX
CATEGORY NO. X–M–X SHEET NO. XXX OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050–0099–01 Scott St. No. 1 Lift Station Rehabilitation – Phase II Design\2 Design Phase\CAD\MECH–5.dwg, 6/12/2025 3:20:04 PM, josanchez

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

STRUCTURAL NOTES:

I. GENERAL

A. All concrete work shall be performed in accordance with ACI 301 specifications, including but not limited to formwork installation, reinforcement placement, concrete mixing, delivery, placement, consolidation, finishing, curing, and protection, ensuring compliance with required strength, durability, and surface quality standards.

B. Design shall conform to the latest IBC Building Code requirements and latest ACI–318 code for concrete structures.

C. All structural plan dimensions are interpreted from and shall be verified with the civil drawings. The engineer shall be notified if discrepancies exist.

D. Structural drawings to be coordinated with civil, electrical, grading, mechanical drawings for all openings, inserts, elevation, and related items.

E. All structural openings dimensions and locations shall be verified with the mechanical drawings. The engineer shall be notified if discrepancies exist.

F. Any unusual conditions encountered shall be brought to the attention of the engineer prior to concrete placement.

G. Locations of construction joints not shown shall be approved by the engineer prior to concrete placement.

H. The contractor shall adhere to the trench and excavation safety requirements set forth in the occupational safety and health administration (OSHA) Standards 29 CFR, Part 1926, Subpart P, excavations.

II. CONCRETE

A. All concrete shall have a minimum compressive strength of 4000 PSI at 28 Days in accordance with ASTM C–39 at 28 days in accordance with ASTM C–78. An air entrainment agent shall be used. fly ash shall not be used.

B. Where concrete is placed against forms or seal slabs, reinforcing bars shall have a minimum of 2 inches clear cover unless shown otherwise. Where concrete is placed against earth, or in contact with liquid, reinforcing bars shall have a minimum of 3 inches clear cover.

C. Metal keyed construction joints and sawed joints may not be used. All joints below the highest water line shall have an approved waterstop.

D. Apply float finish to slab surfaces to receive a trowel finish.

E. All construction joints shall be thoroughly cleaned before fresh concrete is placed. Construction joints shall be roughened to a ¼" amplitude.

F. Except where floor drains occur, depressions between high spots shall not be greater than 1/8 in. Below a 10 ft. long straightedge in accordance with ACI 302.

G. Concrete faces shall not deviate more than 3/16" from the plan dimensions.

H. All exposed edges of beams, columns, slabs and walls shall be chamfered ¾" unless masonry or other members are erected flush with them.

J. Unless noted, anchor bolts and expansion bolts shall be stainless steel. All steel embedded items to be hot–dip galvanized.

III. REINFORCING STEEL

A. All reinforcing bars shall conform to ASTM A–615, grade 60. Arrangement and details of reinforcing steel, including bar supports and spacers, shall be in accordance with the latest ACI detailing manual, unless otherwise noted.

B. Detailing of reinforcing shall be in accordance with ACI 315, latest edition, unless shown otherwise. Placing of reinforcing shall be in accordance with C.R.S.I., "Recommended practice for placing of reinforcing bars", latest edition.

C. Where it is necessary to splice reinforcement at locations other than those shown on the drawings, the splice locations shall be approved by the engineer. Lap splices and embedment lengths, not shown on the drawings, shall be in accordance with C.R.S.I., Latest edition.

D. Support for the reinforcement shall be by metal high chairs either galv. or plastic dipped and spaced not more than six feet center to center.

E. All slab and beam reinforcement shall have a minimum extension into the support in accordance with the latest ACI code. If such extension is not possible, bars shall terminate in standard hooks.

IV. FOUNDATIONS

A. The mats should be poured the same day that they are excavated to minimize drying of the bearing soils. However, a lean concrete slab can be placed to protect the bearing area if the mats are left open overnight.

B. Site grading, fill material properties, excavation, subgrade preparation soil improvement, and allowable bearing pressure, shall follow geotechnical report.

V. STRUCTURAL STEEL:

A. Structural steel shall conform to the latest AISC "Specification for the design,fabrication and erection of structural steel for buildings".

B. Structural steel materials shall comply with the following specifications:
Angles. Plates. Bars. Channels ASTM A36 U.N.O.

C. Field connections shall be bolted, except as otherwise shown or noted.

D. All welding shall conform to the latest specification of the American Welding Society. All welded connections shall be made with AWS A5.1 or A5.5 E70 XX electrode.

E. Anchor bolts and misc embedded steel ------- ASTM A36. Anchor bolts which are submerged, located above a liquid surface, or are in a corrosive atmosphere -------- 361 SS.

F. All equipment anchor bolt dimensions and locations shall be verified from certified vendor drawings, prior to construction.

G. All embedded items and steel structures exposed to weather to be hot–dip galvanized.

DESIGN CRITERIA:

A. Dead load materials assumed in the design are shown on the mechanical and structural drawings.

B. Design code is IBC 2021

C. Live Loads:

Location	Uniform Load	Concentrated Load
Operation Area		
Stairs and Exits	100 PSF Reducible	300 Lbs
Handrails and Guardrails	50 PSF or 200 Lbs applied at top rail in any direction. 50 Lbs in any direction applied at intermediate rails.	
Grab Bars		250 Lbs any Direction

D. Wind Loads:

Basic Wind Speed	137 MPH (3–Sec Gust)
Risk Category	III
Exposure Category	C
Internal Pressure Coeff	+/– 0.18
Components & Cladding	Not Applicable

E. Seismic Load:

Seismic Importance Factor	1.25
Spectral Responce Acceleration (Ss / S1)	0.082 / 0.044
Site Class	D
Spectral Responce Coeff. (Sds / Sd1)	0.072 / 0.066
Seismic Design Category	A

F. Handrails, guardrails and grab bars (including attachment to structure) shall be designed by the fabricator for the loads indicated in the referenced building code. Shop drawings shall be sealed by a professional engineer in the state of Texas, representing the fabricator. All handrails are to be aluminum tube sch 10, with cast aluminum Slip–Joint Type fillings by J.C. Denier Co., Inc. A 4"x¼" aluminum plate with mill finish shall be used as kick plate.

G. Stairs shall be designed by the steel fabricator for code required loads. Shop drawings shall be sealed by a professional engineer in the state of where the project is located, representing the fabricator.

TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS GRADE 60 (UNCOATED) REINFORCEMENT

BAR SIZE	NORMAL WEIGHT					
	F'c = 3000		F'c = 4000		F'c = 5000	
	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld
#3	17	22	15	19	13	17
#4	22	29	19	25	17	23
#5	28	36	24	31	22	28
#6	33	43	29	37	26	34
#7	48	63	42	54	38	49
#8	55	72	48	62	43	56
#9	62	81	54	70	48	63
#10	70	91	61	79	54	71
#11	78	101	67	87	60	78

Notes:
1. *All lengths shown in the table are in inches.*
2. *Ld = Tension development length.*
3. *The table to the left is valid for*
   a. *Beams and columns where concrete cover > = db, c/c bar spacing > = 2db, and with stirrups or ties throughout Ld are not less than the code minimum.*
   b. *Other elements such as slabs, walls, etc. where concrete cover > = db, c/c bar spacing > = 3db.*
4. *For top bars, multiply the splice lengths by 1.30. Top bars require a minimum of 12" of fresh concrete below bar.*
5. *When bars of a different size are lap spliced in tension, splice length shall be the larger of Ld of the larger bar and compression lap splice length of smaller bar.*
6. *Bars spliced by non–contact lap spliced shall not be spaced transversely farther apart than the smaller of one–fifth the required lap splice length and 6".*

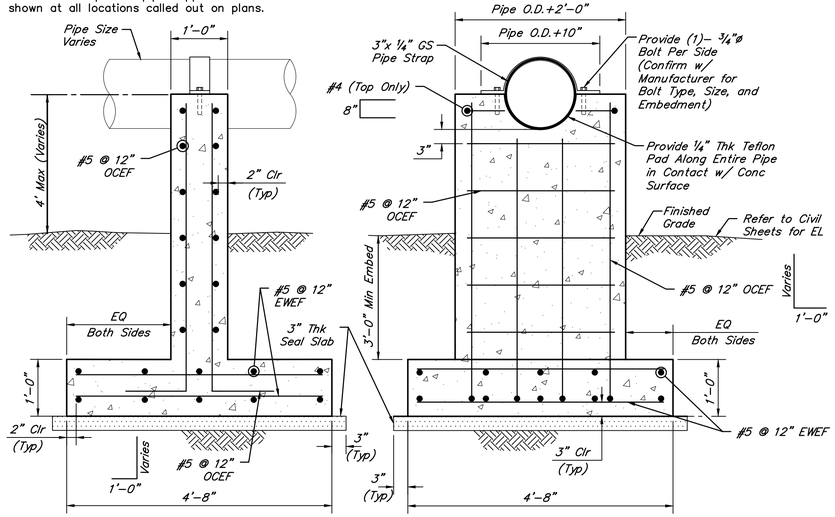
DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION GRADE 60 (UNCOATED) REINFORCEMENT

BAR SIZE	NORMAL WEIGHT					
	F'c = 3000		F'c = 4000		F'c = 5000	
	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb
#3	9	6	8	6	7	6
#4	11	8	10	7	9	6
#5	14	10	12	9	11	8
#6	17	12	15	10	13	9
#7	20	14	17	12	15	11
#8	22	16	19	14	17	12
#9	25	18	22	15	20	14
#10	28	20	25	17	22	16
#11	31	22	27	19	24	17

Notes:
1. *All lengths shown in the table are in inches.*
2. *Lhb = Tension development length.*
3. *Ldh = Lhb, unless conditions of Item 4 are satisfied.*
4. *Ldh = 0.7 Lhb, when side cover normal to plane of hook is not less than 2 ½ inches and for 90° hook, cover on bar extension beyond hook shall not be less than 2 inches.*
5. *Hooks shall not be considered effective in developing bars in compression.*



NOTE:
Contractor to provide pipe support as shown at all locations called out on plans.



CONCRETE PIPE SUPPORT DETAIL FOR 36" DIA. PIPE (MAX) – APPLICABLE TO PIPE SUPPORT DISTANCE UP TO (18'–0")

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: AHMAD DANESHVAR, P.E.

P.E. Serial No.: 132679

Date: JULY 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: RMERHI
JOB NO: 00050–0099–01 DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

STRUCTURAL NOTES & DETAILS SHEET 1 OF 4

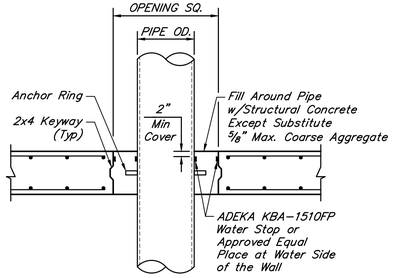
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

CATEGORY NO. 0–S–1 SHEET NO. # OF XXX

FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

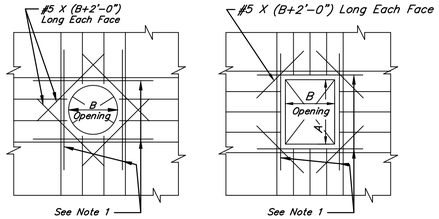


PIPE DIA.	OPENING SQ. (in)
4" – 20"	Pipe Nominal Diameter + 10"
24" – 54"	Pipe Nominal Diameter + 12"

PIPE (W/ANCHOR RING) OPENING DETAIL

SCALE 3/4" = 1'-0"

1



CIRCULAR RECTANGULAR

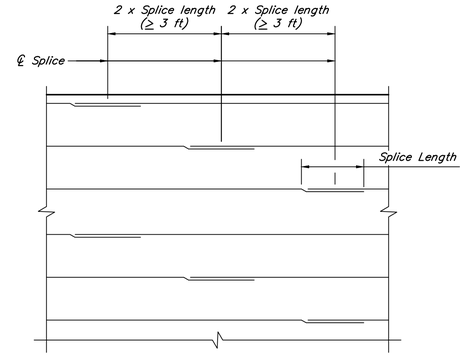
NOTE:

1. Provide additional bars equal to one-half of bars interrupted at each side of opening at 3" C/C. These bars shall be original sizes and lengths as those of the interrupted bars. (Typical for openings in slabs and walls.)
2. Additional bars are extended minimum development length beyond opening edge.
3. For openings 1'-0" or less, the slab steel can be respaced without additional reinforcing.

ADDITIONAL REINFORCING STEEL AT PIPE OPENINGS

NOT TO SCALE

2



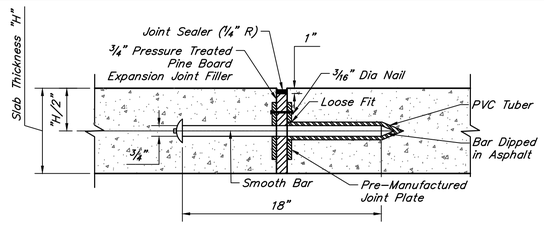
REBAR SPLICE LENGTH

#5- 2'-6" #6- 3'-0"
#7- 3'-6" #8- 4'-0"

HORIZONTAL WALL REINFORCING SPLICE LOCATION DETAILS

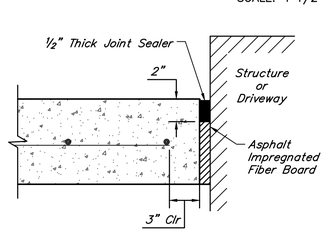
SCALE 3/8" = 1'-0"

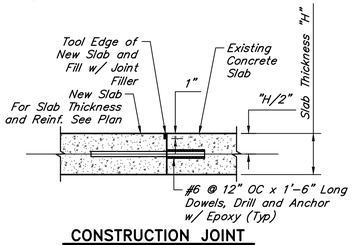
3



DOWELED EXPANSION JOINT

SCALE: 1 1/2 " = 1'-0"





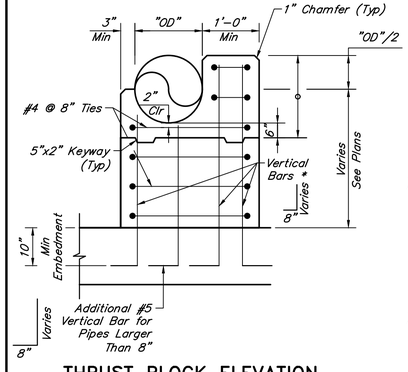
ISOLATION JOINT (IJ)

NOT TO SCALE

CONSTRUCTION JOINT AT EXISTING PAVEMENT

NOT TO SCALE

4

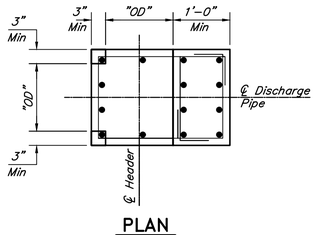


THRUST BLOCK ELEVATION

SCALE: 3/4" = 1'-0"

*VERTICAL BARS

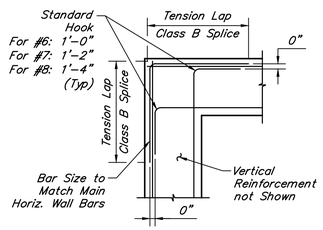
PIPE DATA	NO. OF VERT BARS
4"–8"	3 x 2#5
10"–12"	3 x 3#5
14"–16"	3 x 4#5
18"–20"	3 x 4#5



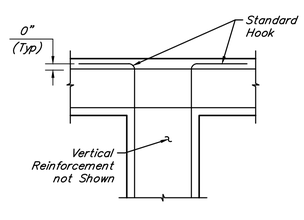
PLAN

(3x4 #5 LAYOUT IS SHOWN AS AN EXAMPLE)
SCALE: 3/4" = 1'-0"

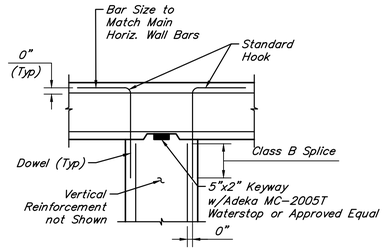
7



PLAN



PLAN WITHOUT CONSTRUCTION JOINT



PLAN WITH CONSTRUCTION JOINT

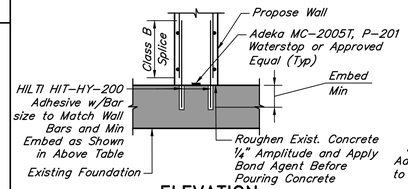
CORNER DETAILS

3/4" = 1'-0"

INTERSECTION DETAILS

1/2" = 1'-0"

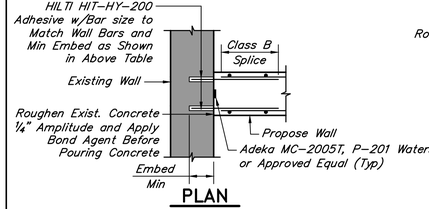
5



ELEVATION

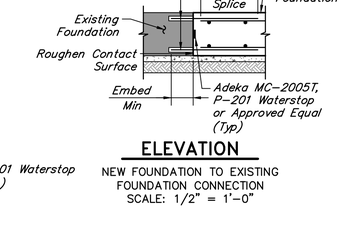
NEW WALL TO EXISTING FOUNDATION CONNECTION
SCALE: 1/2" = 1'-0"

BAR SIZE	EMBED (MIN)
#5	7 1/2"
#6	9"
#7	10 1/2"
#8	12"
#9	13 1/2"



PLAN

NEW WALL TO EXISTING WALL CONNECTION
SCALE: 1/2" = 1'-0"



ELEVATION

NEW FOUNDATION TO EXISTING FOUNDATION CONNECTION
SCALE: 1/2" = 1'-0"

8

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

Not intended for construction, bidding or permit purposes.

Engineer: AHMAD DANESHVAR, P.E.

P.E. Serial No.: 132679

Date: JULY 2025

QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: RMERHI
JOB NO: 00050-0099-01 DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

STRUCTURAL DETAILS
SHEET 2 OF 4

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

CATEGORY NO. 0-S-2 SHEET NO. # OF XXX

FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

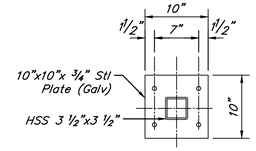
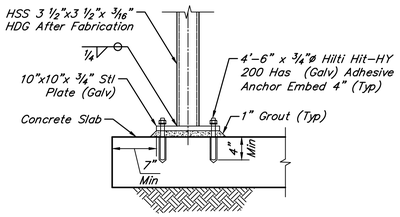


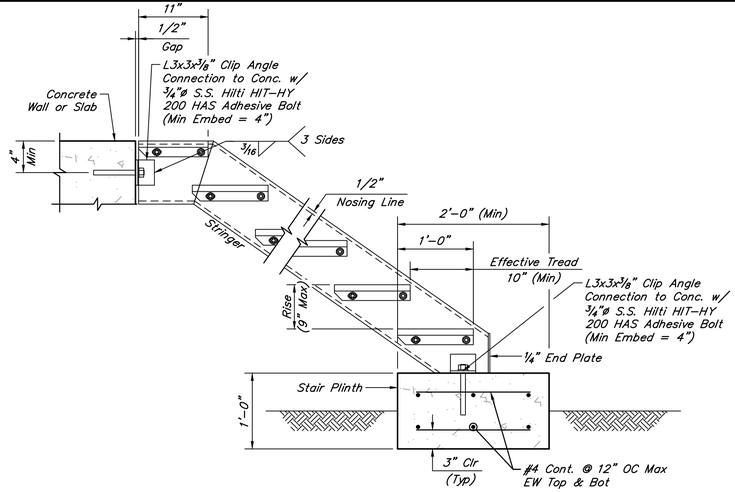
PLATE
SCALE 1"=1'-0"



VIEW
SCALE 1"=1'-0"

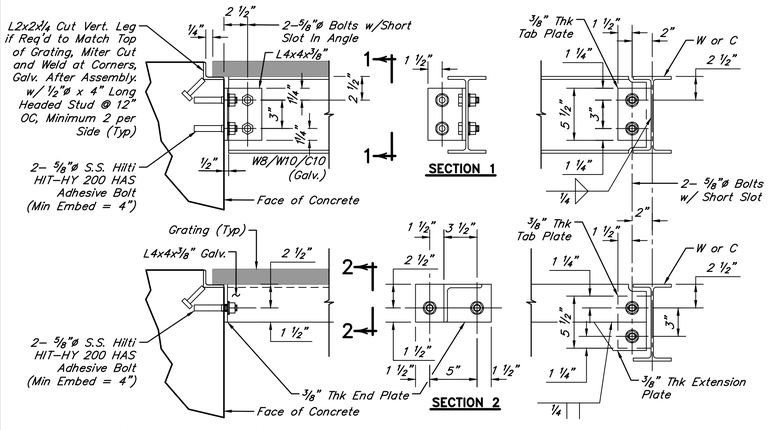
DEVICE MOUNTING POST DETAIL
SCALE 1"=1'-0"

1



STAIR STRINGER CONNECTION
1" = 1'-0"

2

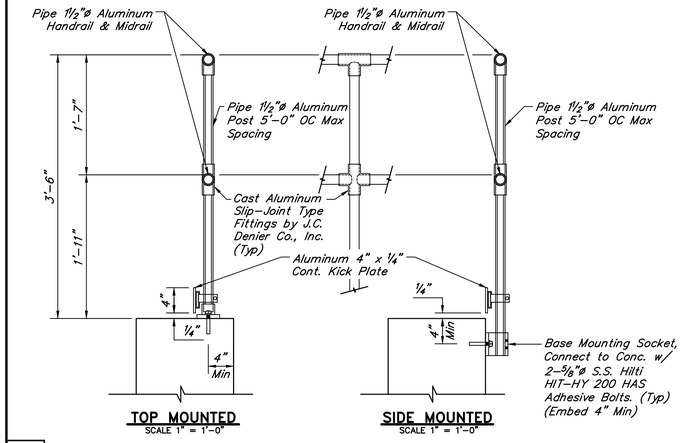


BEAM TO CONCRETE CONNECTION

BEAM TO BEAM CONNECTION

GRATING ANGLE SUPPORT AND BEAM
WHEN PROVIDING ALUMINUM OR STAINLESS STEEL GRATING AND 1/8" x 1" NEOPRENE, TEFLON OR UHMW POLYETHYLENE PAD, ADHERE TO ANGLE.
1 1/2" = 1'-0"

3

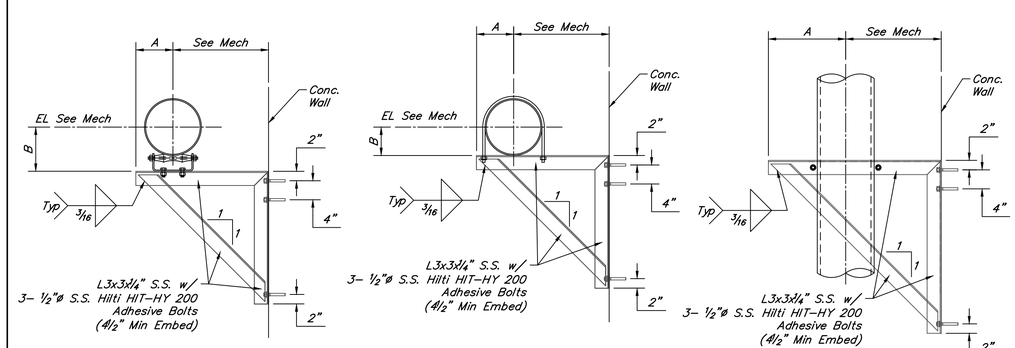


TOP MOUNTED
SCALE 1" = 1'-0"

SIDE MOUNTED
SCALE 1" = 1'-0"

ALUMINUM HANDRAIL

4



PIPE SUPPORT TYPE "A"
WITH ROLLER CHAIR

PIPE SUPPORT TYPE "B"
WITH U-BOLT

PIPE SUPPORT TYPE "C"
WITH U-BOLT

PIPE SUPPORT DETAIL

5

PIPE SUPPORT SCHEDULE

PS No.	PS Type	PIPE OD (in)	Dimensions A (in)	Dimensions B (in)
PS 1	A	10"	10"	10"
PS 2	C	6"	10"	--
PS 3	A	8"	10"	8⅛"
PS 4				
PS 5				
PS 6				

NO.	DATE	REVISIONS	APP.

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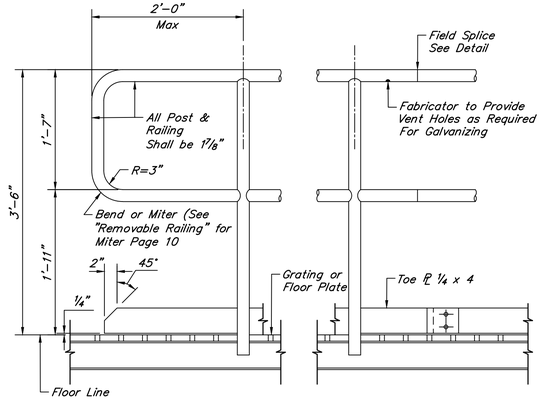
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LIFT STATION REHABILITATION

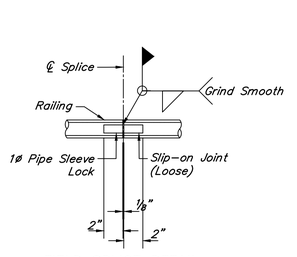
STRUCTURAL DETAILS
SHEET 3 OF 4

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

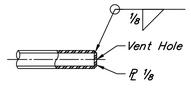
DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 0-S-3 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY



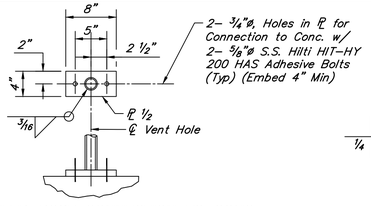
ELEVATION - TYPICAL RAILING
SCALE 1" = 1'-0"



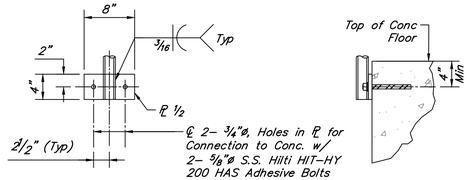
FIELD SPLICE DETAIL



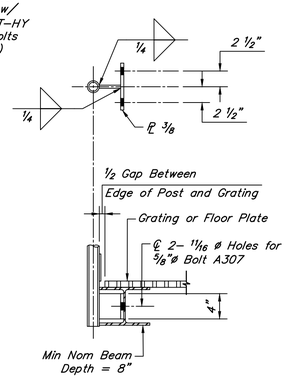
END CLOSURE DETAIL



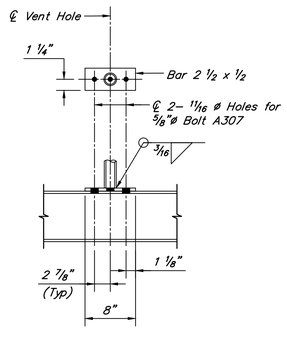
TOP MOUNTED POST CONNECTION TO CONC.
SCALE 1"=1'-0"



SIDE MOUNTED POST CONNECTION TO CONC.
SCALE 1"=1'-0"



SIDE MOUNTED POST CONNECTION TO STEEL BEAM
SCALE 1"=1'-0"

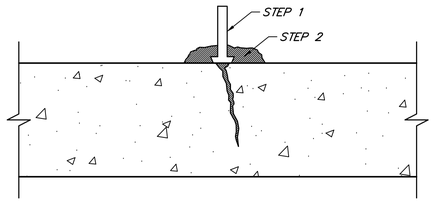


TOP MOUNTED POST CONNECTION TO STEEL BEAM
SCALE 1"=1'-0"

GALVANIZED STEEL HANDRAIL

6

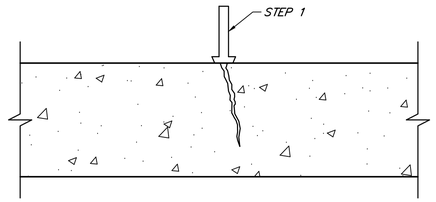
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



1. CLEAN THE CONCRETE SURFACE AND SET PORTING DEVICES OVER CRACKS.
2. PLACE MIXED SIKADUR 31, HI–MOD GEL EPOXY RESIN ADHESIVE, OR APPROVED EQUAL, OVER CRACKS AND AROUND EACH INJECTION PORT A MIN. OF 1" WIDE BY ⅛" THICK.
3. ALLOW SUFFICIENT TIME FOR EPOXY RESIN ADHESIVE CAP SEAL TO SET BEFORE INJECTING.
4. WHEN THE CAP SEAL HAS CURED, INJECT SIKADUR 35, HI–MOD LV, OR APPROVED EQUAL, WITH STEADY PRESSURE. PER MANUFACTURER INSTRUCTION.
5. USE AUTOMATED INJECTION EQUIPMENT OR MANUAL METHOD.

CRACK NO. 1 FILLER/CAP SEAL @ CRACKS > 1/8"

SCALE: 1 1/2" = 1'–0"

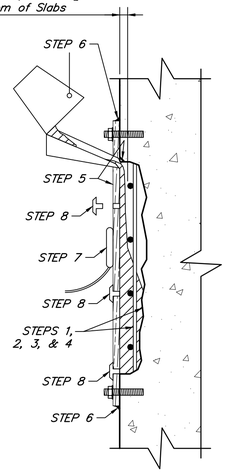


1. CLEAN THE CONCRETE SURFACE AND SET PORTING DEVICES OVER CRACKS. PER MANUFACTURER INSTRUCTION.
2. INJECT SIKAFIX HH+HYDROPHOBIC URETHANE OR APPROVED EQUAL.
3. USE AUTOMATED INJECTION EQUIPMENT OR MANUAL METHOD.
4. BEGIN INJECTING AT THE BOTTOM OF THE CRACK AND WORK VERTICALLY.

CRACK NO. 2 FILLER @ HAIRLINE CRACKS

SCALE: 1 1/2" = 1'–0"

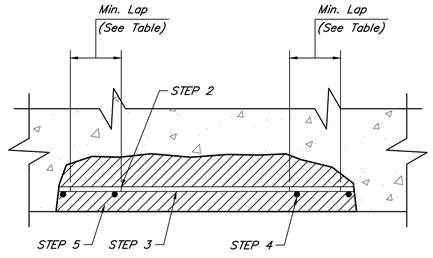
Provide Min Cover of 3" for Bottom of Beams, 1½" for Sides of Beams, and 1 ½" for Bottom of Slabs



1. BREAK–OUT CRACKED OR SPALLED CONCRETE AND REMOVE ANY FORM OR OTHER DEBRIS UNTIL SOLID CONCRETE IS REACHED.
2. REPLACE STEEL REINFORCEMENT AS DIRECTED BY ENGINEER. FOR REINFORCING REPLACEMENT, REFER TO DETERIORATED REINFORCING REPLACEMENT DETAIL.
3. PREPARE SURFACE ACCORDING TO THE SIKACRETE 211 SPECIFICATIONS AND/OR MANUFACTURER'S RECOMMENDATIONS.
4. PRE–WET SURFACE TO SSD. APPLY BOND AGENT SIKA ARMATEC 110 EPOCEM, OR APPROVED EQUAL, TO REINFORCING STEEL.
5. SET FORM AND CHIP SPOT FOR POUR BOX. APPLY RELEASE AGENT TO FORM, OR USE PLASTIC LINED PLYWOOD.
6. RUN BEAD OF SIKAFLEX 1A, OR APPROVED EQUAL, AROUND FORM EDGE, LET CURE, THEN ANCHOR FORM. FILL WITH WATER TO CHECK FOR WATER TIGHTNESS. LET DRAIN TO NO FREE STANDING WATER.
7. VIBRATE FORM WHILE POURING SIKACRETE 211, OR APPROVED EQUAL.
8. VENT TO BE CAPPED WHEN STEADY FLOW IS EVIDENT.
9. STRIP FORM WHEN APPROPRIATE.
10. DRY PACK ANCHOR HOLES WITH MORTAR.

FORM AND POUR (VERTICAL) CONCRETE REPAIR

NOT TO SCALE



1. SHORE STRUCTURE AS REQUIRED PRIOR TO MODIFICATIONS OF STRUCTURAL CONNECTIONS.
2. EXPOSED REINFORCING STEEL SHOULD BE MECHANICALLY CLEANED OR SAND BLASTED TO REMOVE ALL TRACES OF RUST.
3. DETERMINE STEEL SECTION LOSS FOR EACH EXPOSED REINFORCING BAR. REPLACE BARS WHERE MORE THAN 25% AREA LOSS HAS OCCURRED, AS DIRECTED BY THE ENGINEER.
4. SPLICE EXISTING BAR W/ A NEW BAR (ASTM A615 GRADE 60) OF STEEL CROSS SECTIONAL AREA EQUIVALENT TO 68% OF THE CROSS SECTIONAL AREA OF THE EXISTING BAR.
5. COMPLETE CONCRETE REPAIR. (SEE DETAIL)

DETERIORATED REINFORCING REPLACEMENT

NOT TO SCALE

BAR SIZE	DIAMETER (IN.)	CROSS–SECTIONAL AREA (IN^2)	MIN. LAP (IN.)
#3	0.375	0.11	12
#4	0.500	0.20	15
#5	0.625	0.31	19
#6	0.750	0.44	23
#7	0.875	0.60	33
#8	1.000	0.79	37
#9	1.128	1.00	42
#10	1.270	1.27	47
#11	1.410	1.56	52

NOTE:

LAP LENGTHS SHOWN ARE FOR COVERS OF AT LEAST 1.0 BAR DIAMETER AND HORIZONTAL C.C. SPACING OF AT LEAST 2.0 BAR DIAMETERS. IF THE LATTER CANNOT BE ACHIEVED ON A BEAM, CRACK FILLER/CAP SEAL DETAIL MAY BE USED. OTHERWISE, IF AN ADEQUATE SPLICE LENGTH CANNOT BE ACHIEVED, USE AN APPROVED MECHANICAL OR WELDED SPLICE CAPABLE OF DEVELOPING AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR. ALL WELDING SHALL CONFORM TO "STRUCTURAL WELDING CODE – REINFORCING STEEL" (ANSI/AWS D1.4). NEW REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706. IF A CHEMICAL ANALYSIS OF THE EXISTING BARS IS NOT KNOWN OR OBTAINED, THEN THE EXISTING BARS SHOULD BE PREHEATED PER ANSI/AWS D1.4.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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Engineer: AHMAD DANESHVAR, P.E.

P.E. Serial No.: 132679

Date: JULY 2025

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

STRUCTURAL DETAILS
SHEET 4 OF 4

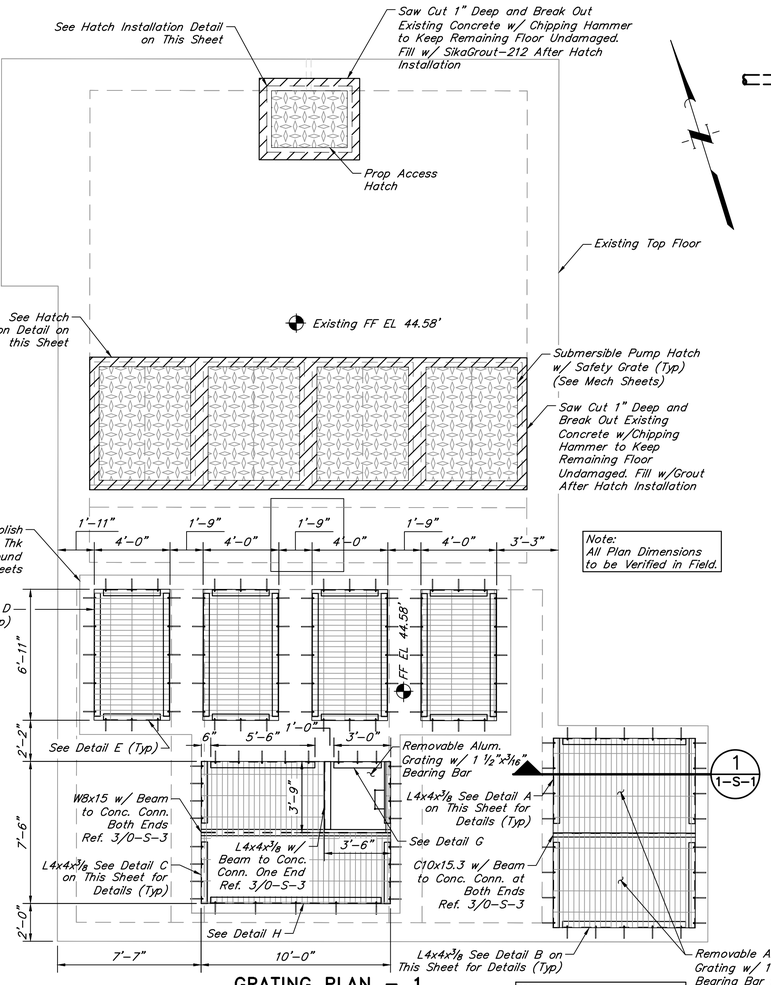
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

CATEGORY NO. 0–S–4 SHEET NO. # OF XXX

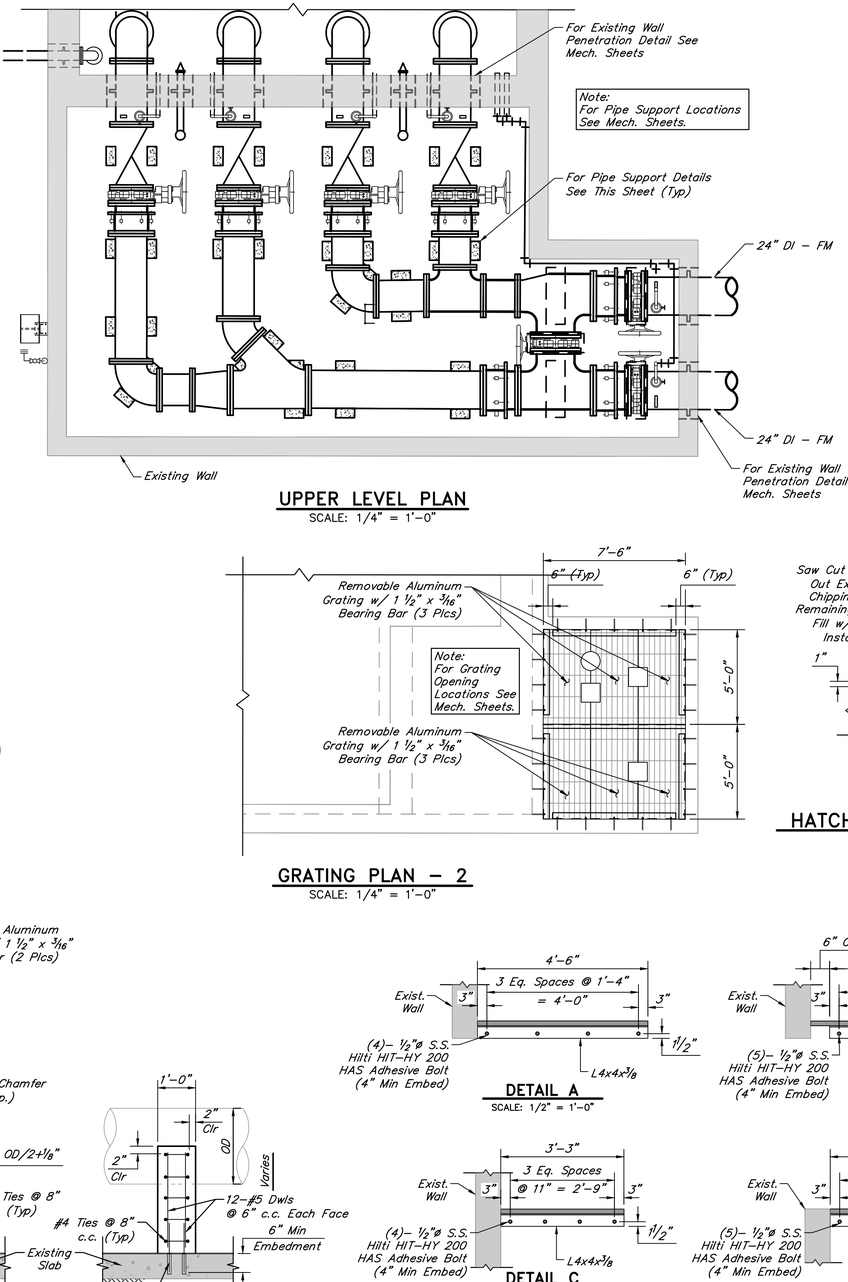
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



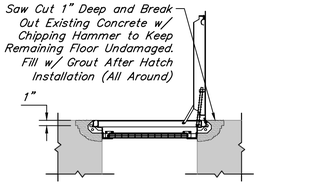
GRATING PLAN – 1
SCALE: 1/4" = 1'–0"

Note:
1. Grating Supports Shall be Installed on Both Levels. See Section C & Grating Plan–2 for Details.
2. For Ladder Details see Mechanical Sheets.

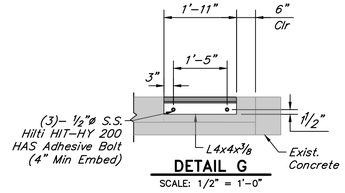


UPPER LEVEL PLAN
SCALE: 1/4" = 1'–0"

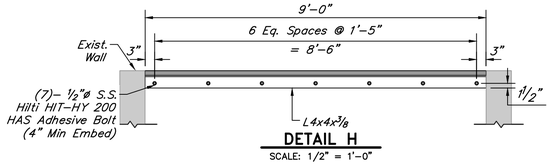
GRATING PLAN – 2
SCALE: 1/4" = 1'–0"



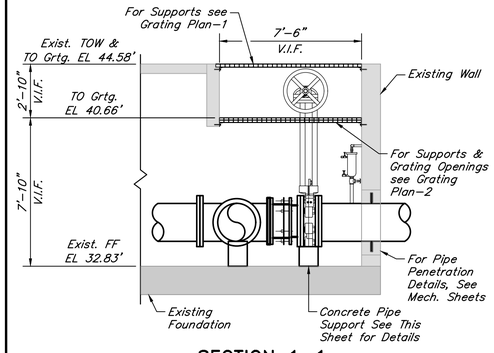
HATCH INSTALLATION DETAIL
NOT TO SCALE



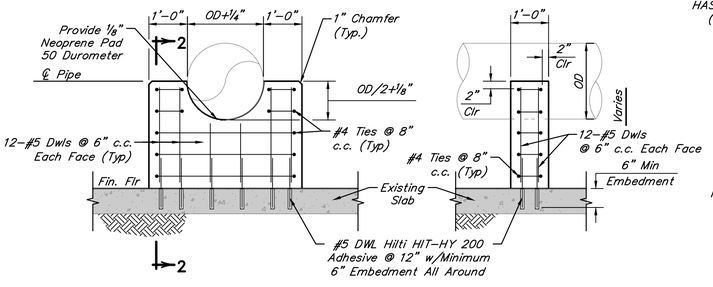
DETAIL G
SCALE: 1/2" = 1'–0"



DETAIL H
SCALE: 1/2" = 1'–0"



SECTION 1–1
SCALE: 1/4" = 1'–0"

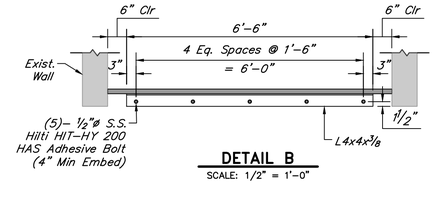


SECTION 2–2

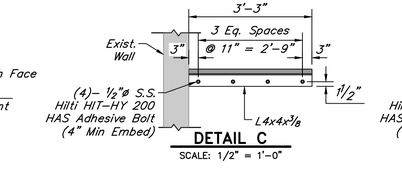
Note:
Contractor Shall Adjust Elevation In Accordance With Dimension From Approved Manufacturer Submittal.

PIPE SUPPORT DETAIL
SCALE: 1/2" = 1'–0"

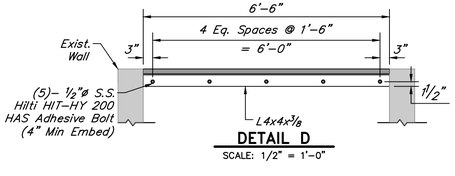
DETAIL A
SCALE: 1/2" = 1'–0"



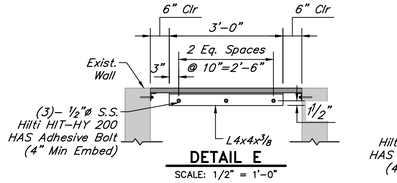
DETAIL B
SCALE: 1/2" = 1'–0"



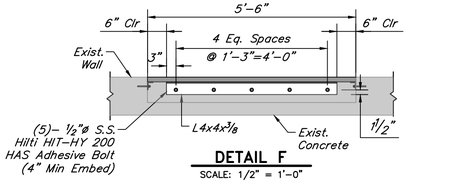
DETAIL C
SCALE: 1/2" = 1'–0"



DETAIL D
SCALE: 1/2" = 1'–0"



DETAIL E
SCALE: 1/2" = 1'–0"



DETAIL F
SCALE: 1/2" = 1'–0"

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: AHMAD DANESHVAR, P.E.
P.E. Serial No.: 132679
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JTREVINO
JOB NO: 00050–0099–01 | DWG BY: ASALGADO

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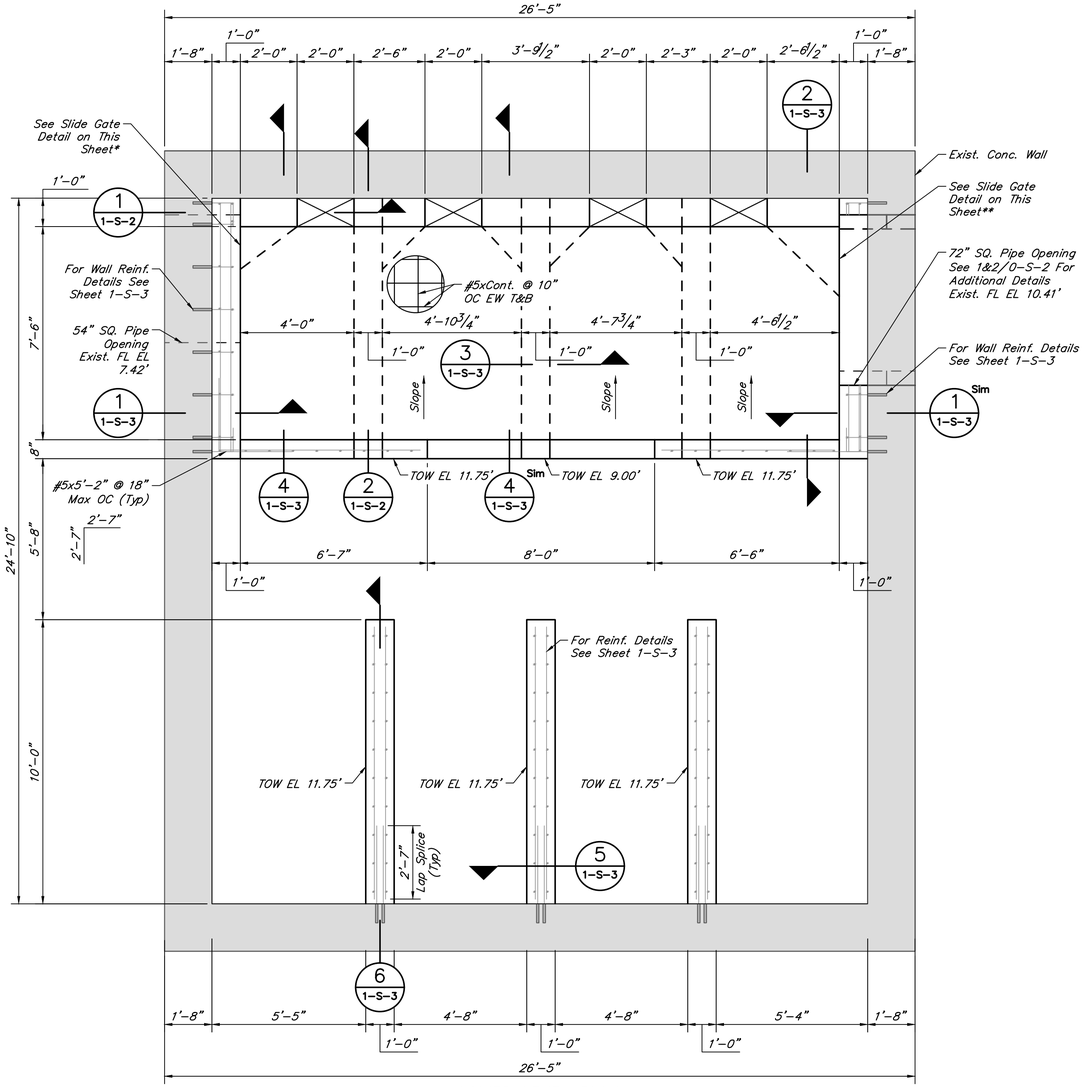
SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATHER PUMP STATION IMPROVEMENT PLAN

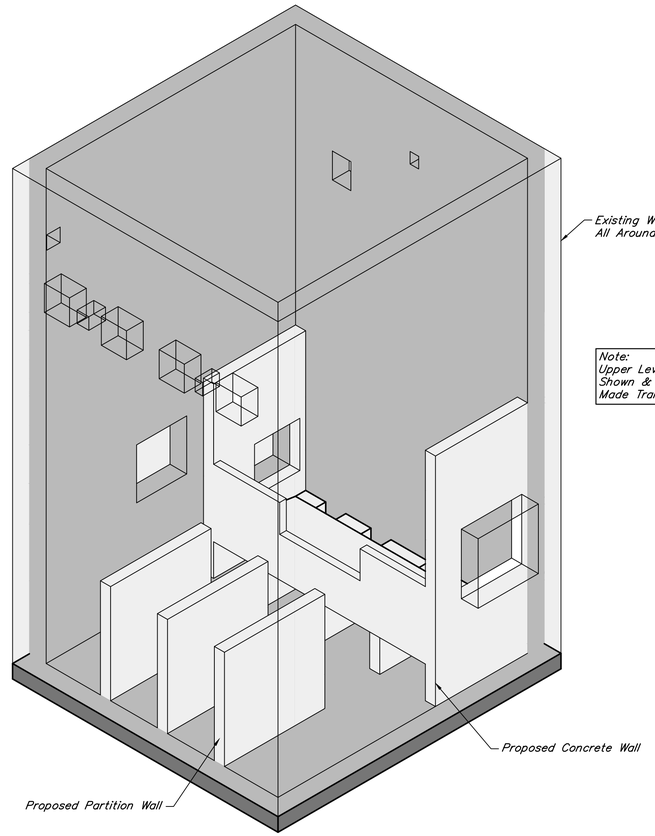
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 1–S–1 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

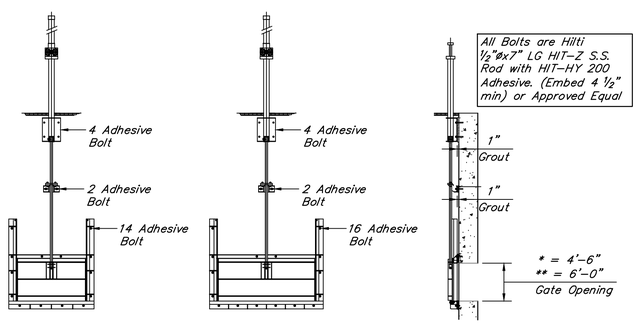


LOWER LEVEL PLAN
SCALE: 3/8" = 1'-0"



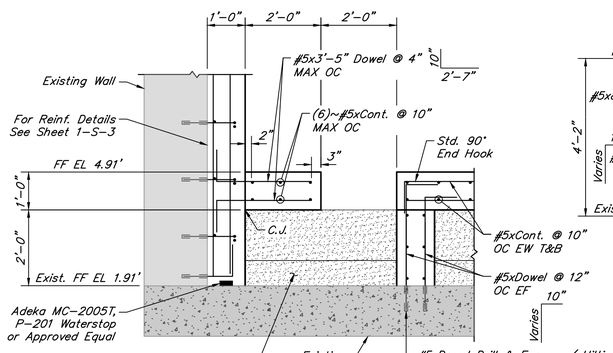
Note:
Upper Level & Top Floor Not Shown & Lower Level Outer Walls Made Transparent For Clarity.

3D VIEW
SCALE: 3/16" = 1'-0"

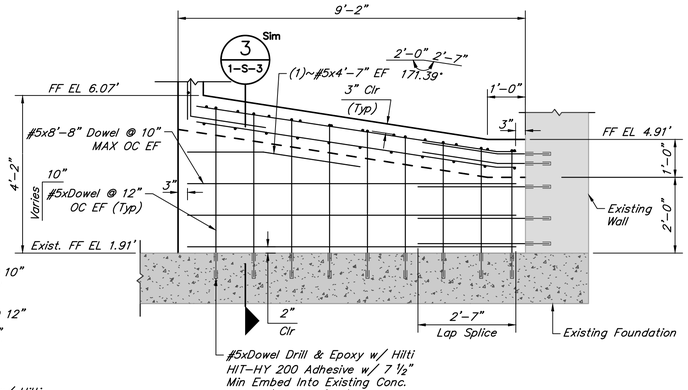


FOR 54" SQ OPENING — FOR 72" SQ OPENING — PLAN

SLIDE GATE TO CONCRETE WALL FIXING DETAIL
1/4" = 1'-0"



SECTION 1-1
SCALE: 1/2" = 1'-0"



SECTION 2-2
SCALE: 1/2" = 1'-0"

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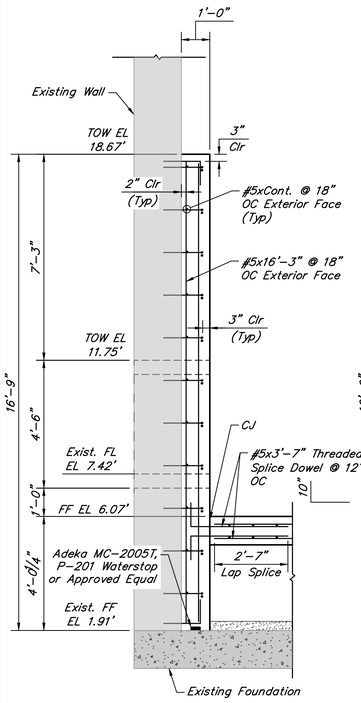
SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATHER PUMP STATION LOWER LEVEL PLAN & 3D VIEW

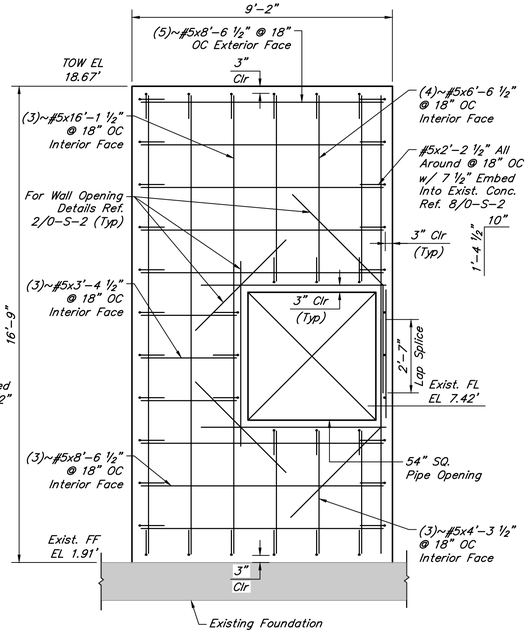
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 1-S-2 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

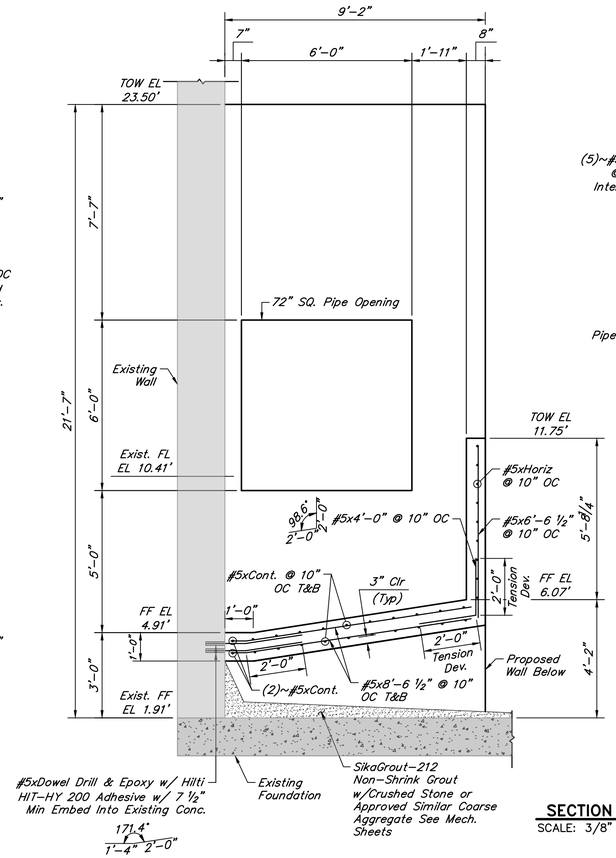
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



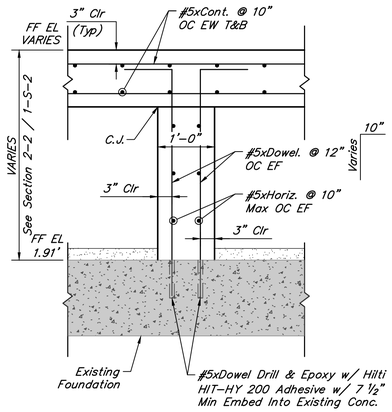
SECTION 1-1
SCALE: 3/8" = 1'-0"



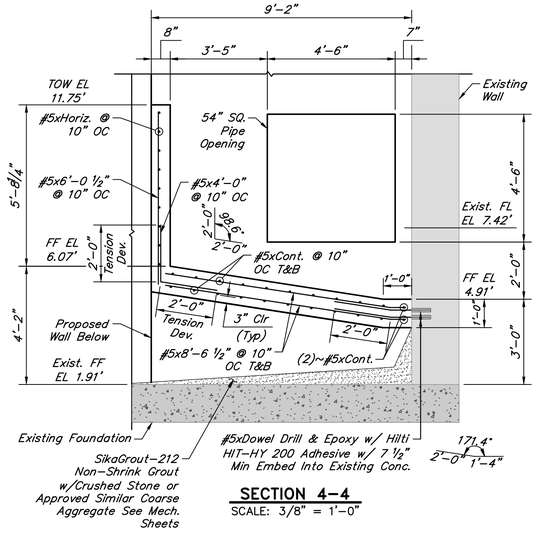
SECTION 2-2
SCALE: 3/8" = 1'-0"



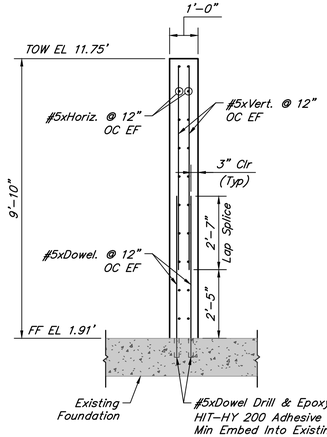
SECTION 3-3
SCALE: 3/4" = 1'-0"

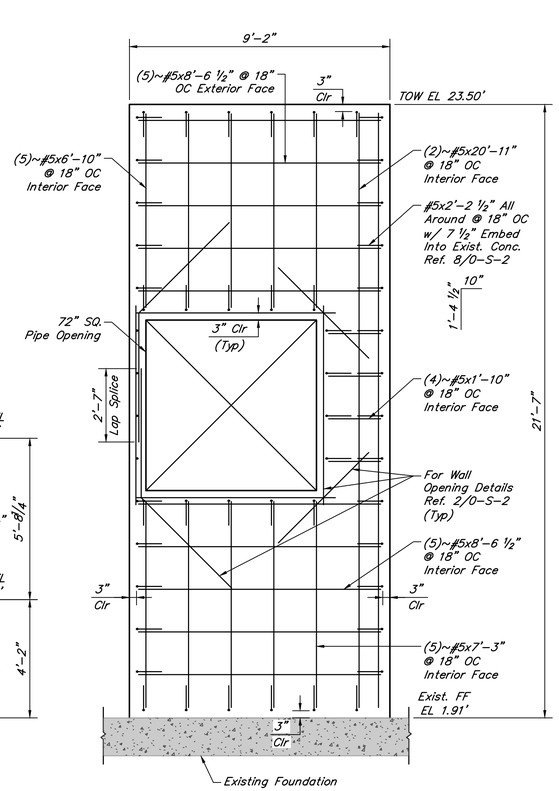


SECTION 4-4
SCALE: 3/8" = 1'-0"

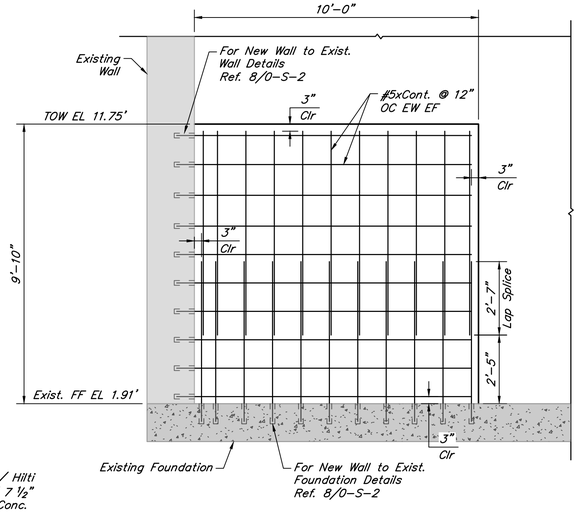


SECTION 5-5
SCALE: 3/8" = 1'-0"





SECTION 2-2
SCALE: 3/8" = 1'-0"



SECTION 6-6
SCALE: 3/8" = 1'-0"

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P.E. Serial No.: 132679
Date: JULY 2025

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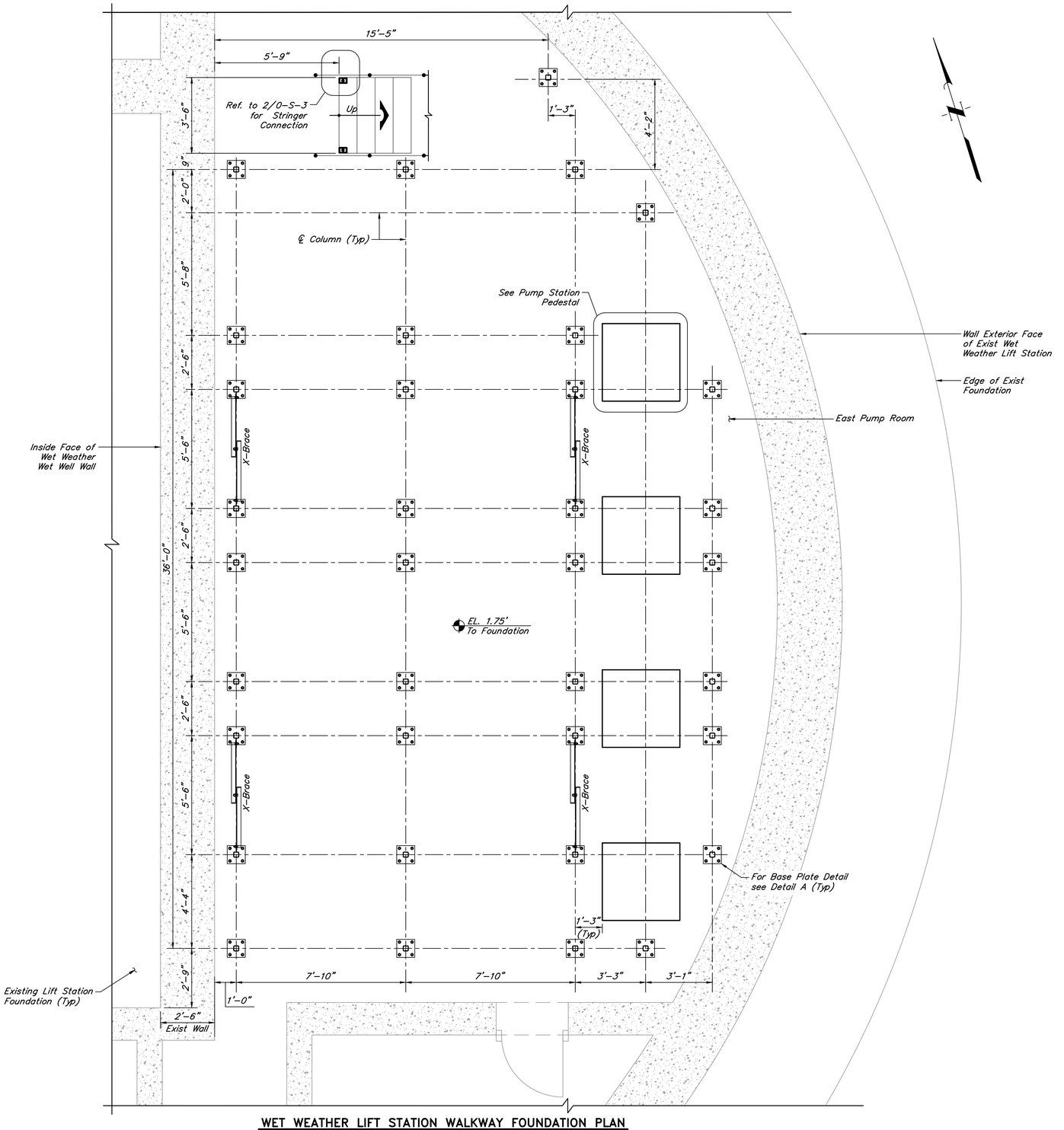
SCOTT STREET No. 1
LIFT STATION REHABILITATION

DRY WEATHER PUMP STATION LOWER LEVEL SECTIONS

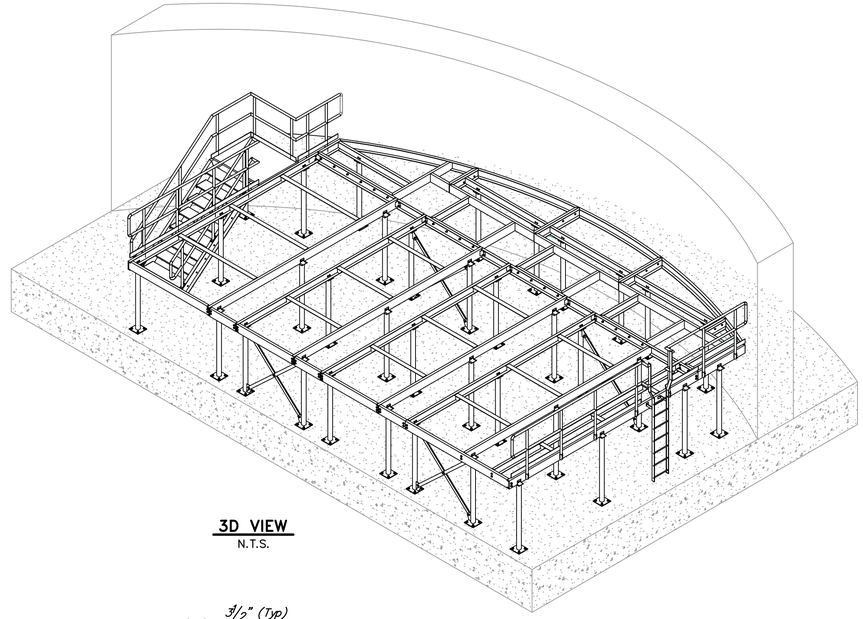
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 1-S-3 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

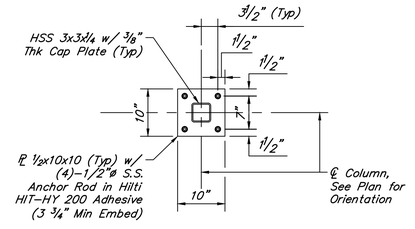
K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\S-A1-DRY WEATHER PUMP STATION.dwg, Jul 09, 2025 - 10:32am, sfl



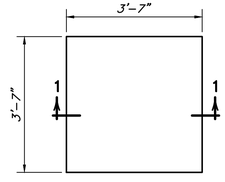
WET WEATHER LIFT STATION WALKWAY FOUNDATION PLAN
(EAST SIDE SHOWN, WEST SIDE WILL BE A MIRRORED LAYOUT OF THE EAST SIDE)
3/8" = 1'-0"



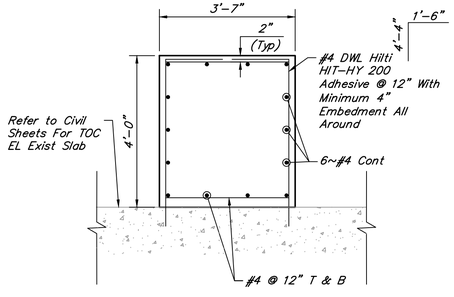
3D VIEW
N.T.S.



DETAIL A
SCALE: 3/4" = 1'-0"



PUMP STATION PEDESTAL PLAN
1/2" = 1'-0"



SECTION 1-1
SCALE: 1" = 1'-0"

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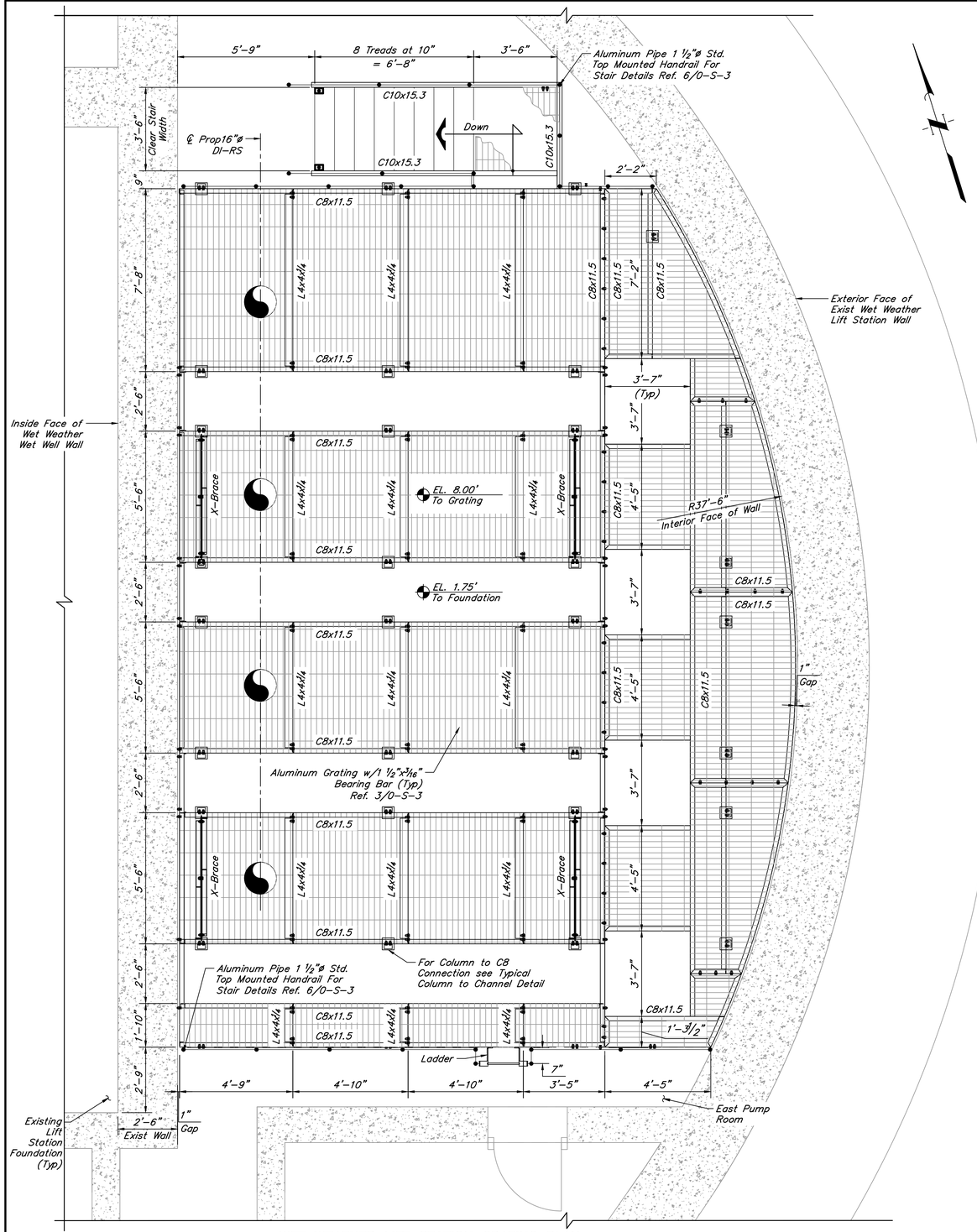
SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION WALKWAY PLATFORM FOUNDATION

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

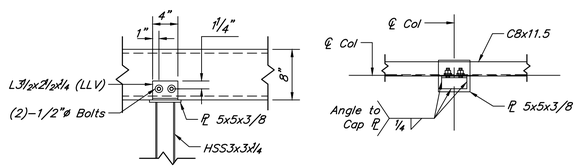
DRAWING SCALE 3/8"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. 2-S-1 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



WET WEATHER LIFT STATION GRATING PLAN

(EAST SIDE SHOWN; WEST SIDE WILL BE A MIRRORED LAYOUT OF THE EAST SIDE)
ALL HORIZONTAL BEAMS ARE C8x11.5 (UNO)
3/8" = 1'-0"



TYPICAL COLUMN TO CHANNEL

SCALE: 1" = 1'-0"

NO.	DATE	REVISIONS	APP.

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION WALKWAY PLATFORM GRATING PLAN

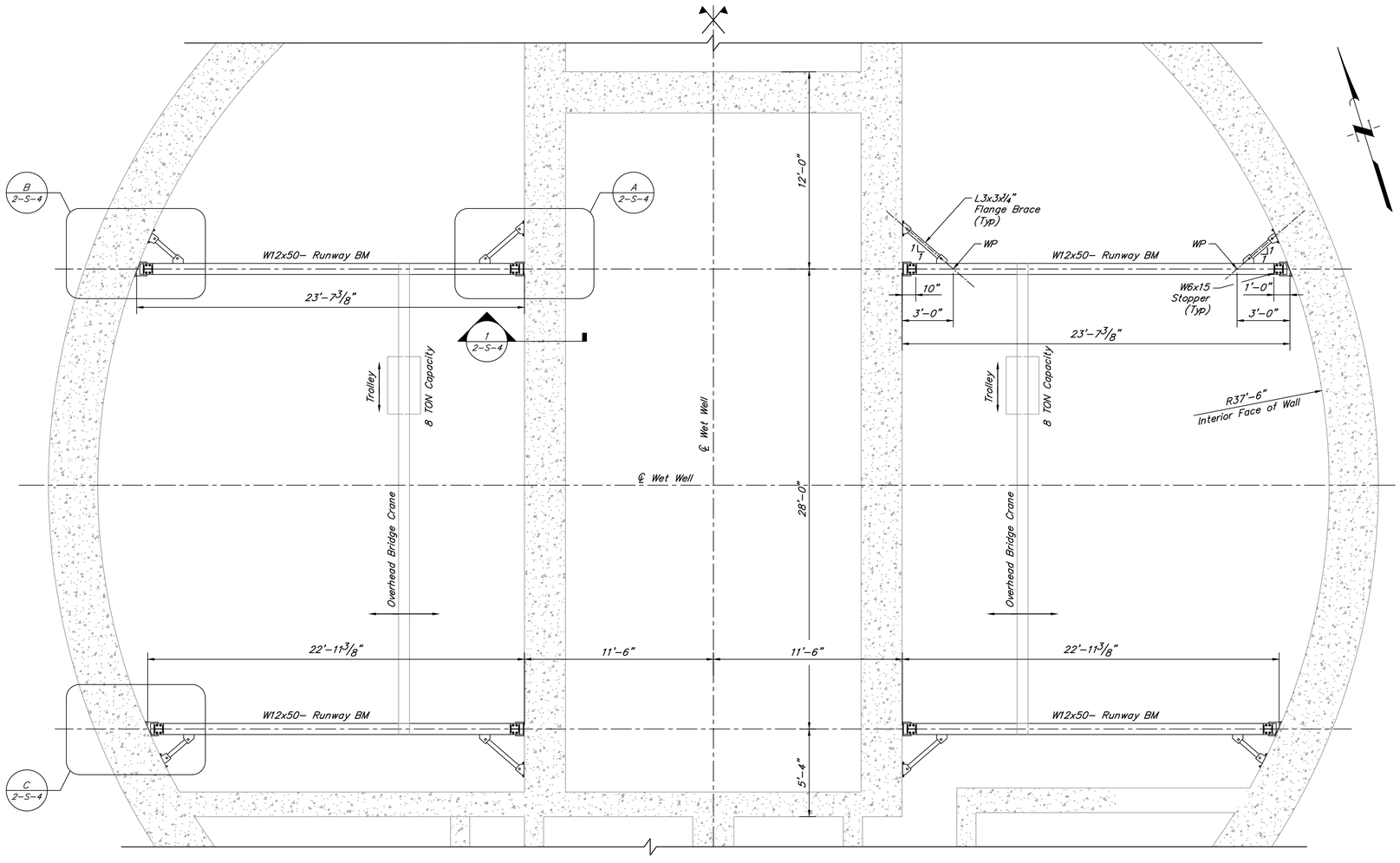
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

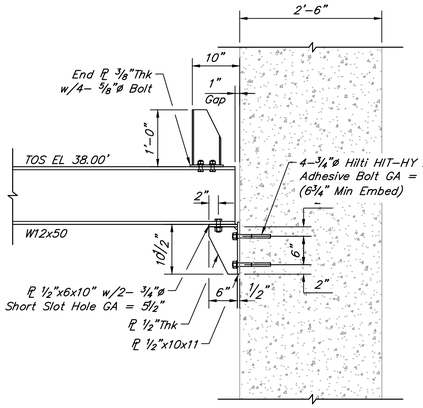
CATEGORY NO. 2-S-2 SHEET NO. # OF XXX

FOR CITY OF HOUSTON USE ONLY

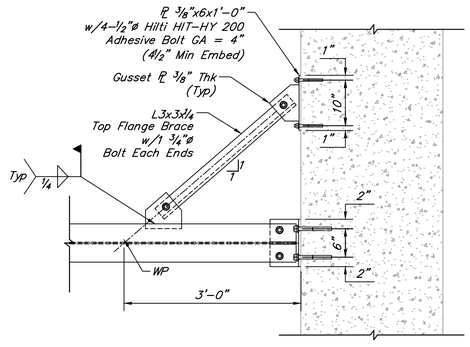
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



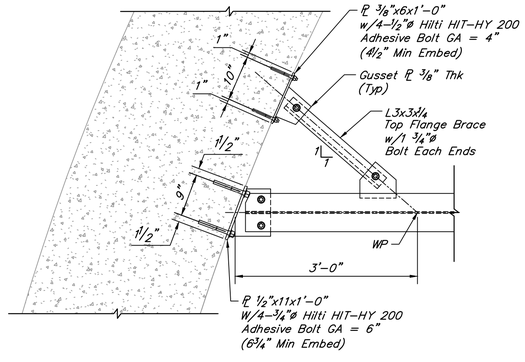
OVERHEAD CRANE–RUNWAY BEAMS
1/4" = 1'–0"



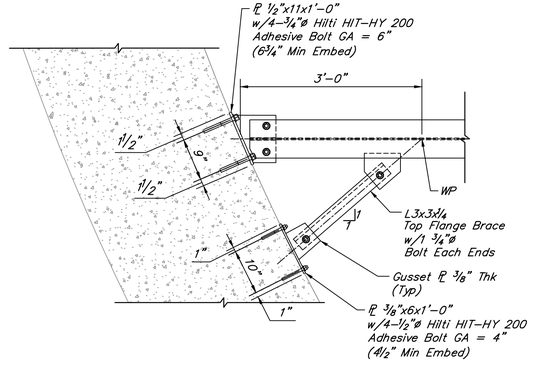
SECTION 1–1
SCALE: 3/4" = 1'–0"



DETAIL A–A
STOPPER NOT SHOWN FOR CLARITY
SCALE: 3/4" = 1'–0"



DETAIL B–B
STOPPER NOT SHOWN FOR CLARITY
SCALE: 3/4" = 1'–0"



DETAIL C–C
STOPPER NOT SHOWN FOR CLARITY
SCALE: 3/4" = 1'–0"

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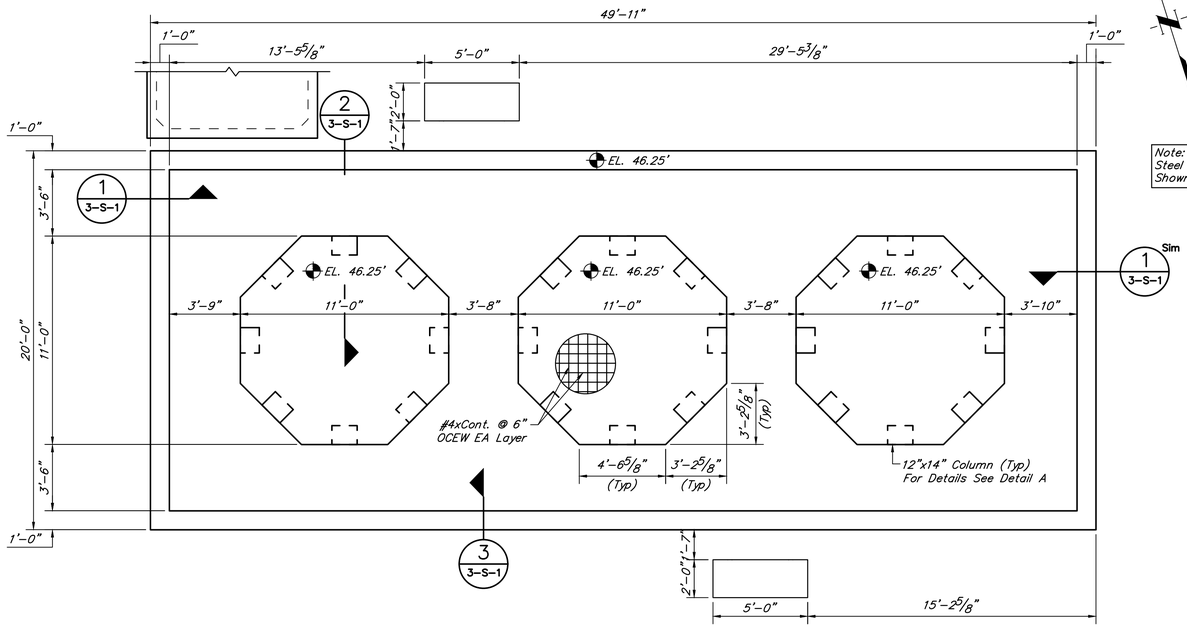
SCOTT STREET No. 1
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION
OVERHEAD CRANE–RUNWAY BEAMS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

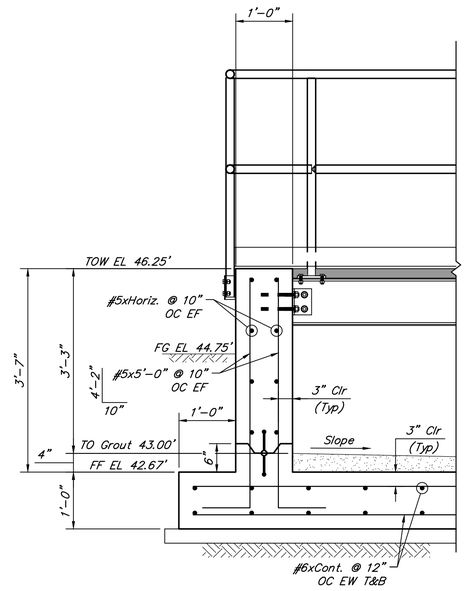
DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 2–S–3 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

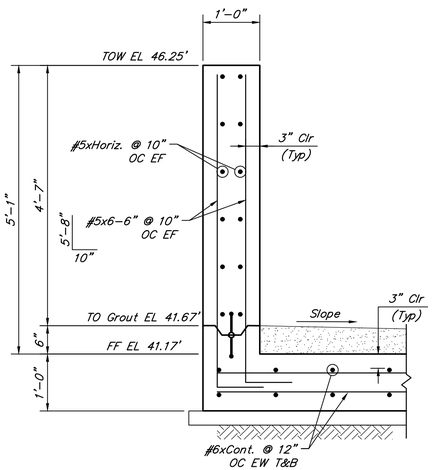


CONCRETE TOP OF WALL PLAN
SCALE: 1/4" = 1'-0"

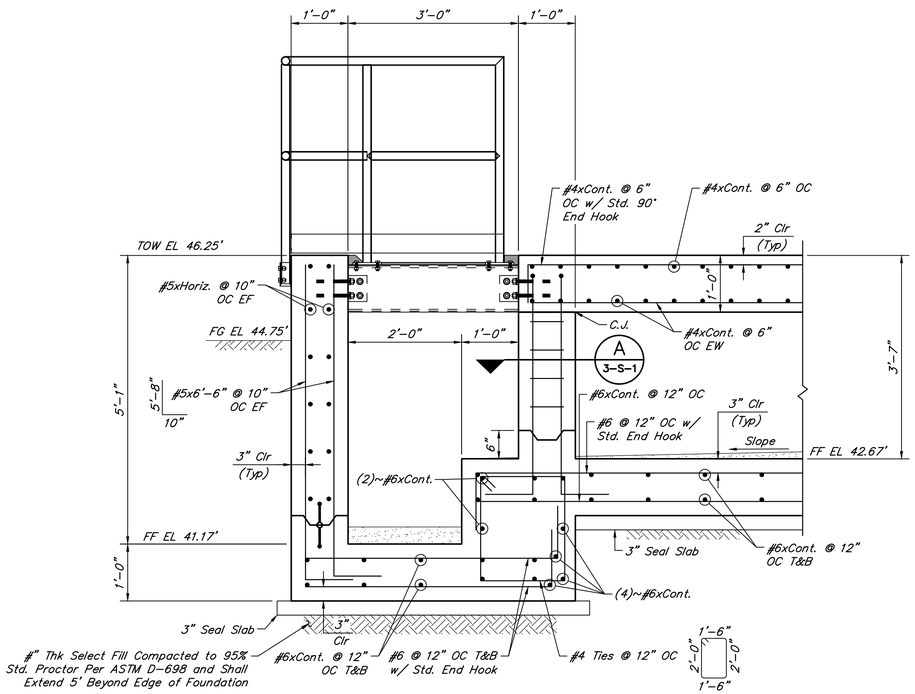
Note:
Steel Elements Not Shown for Clarity



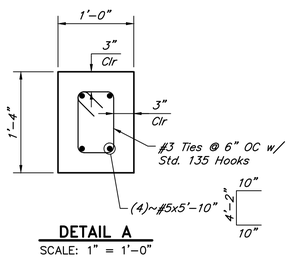
SECTION 3-3
SCALE: 3/4" = 1'-0"



SECTION 1-1
SCALE: 3/4" = 1'-0"



SECTION 2-2
SCALE: 3/4" = 1'-0"



DETAIL A
SCALE: 1" = 1'-0"

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
Engineer: AHMAD DANESHVAR, P.E.
P.E. Serial No.: 132679
Date: JULY 2025

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025 | DGN BY: JTREVINO
JOB NO: 00050-0099-01 | DWG BY: ASALGADO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

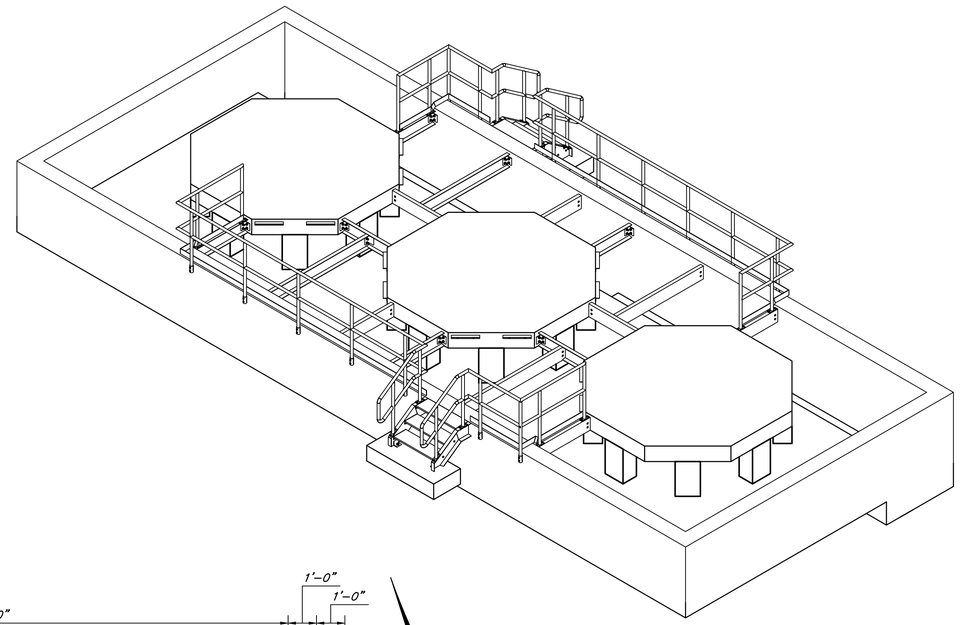
SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL STORAGE TOP VIEW PLAN & SECTIONS

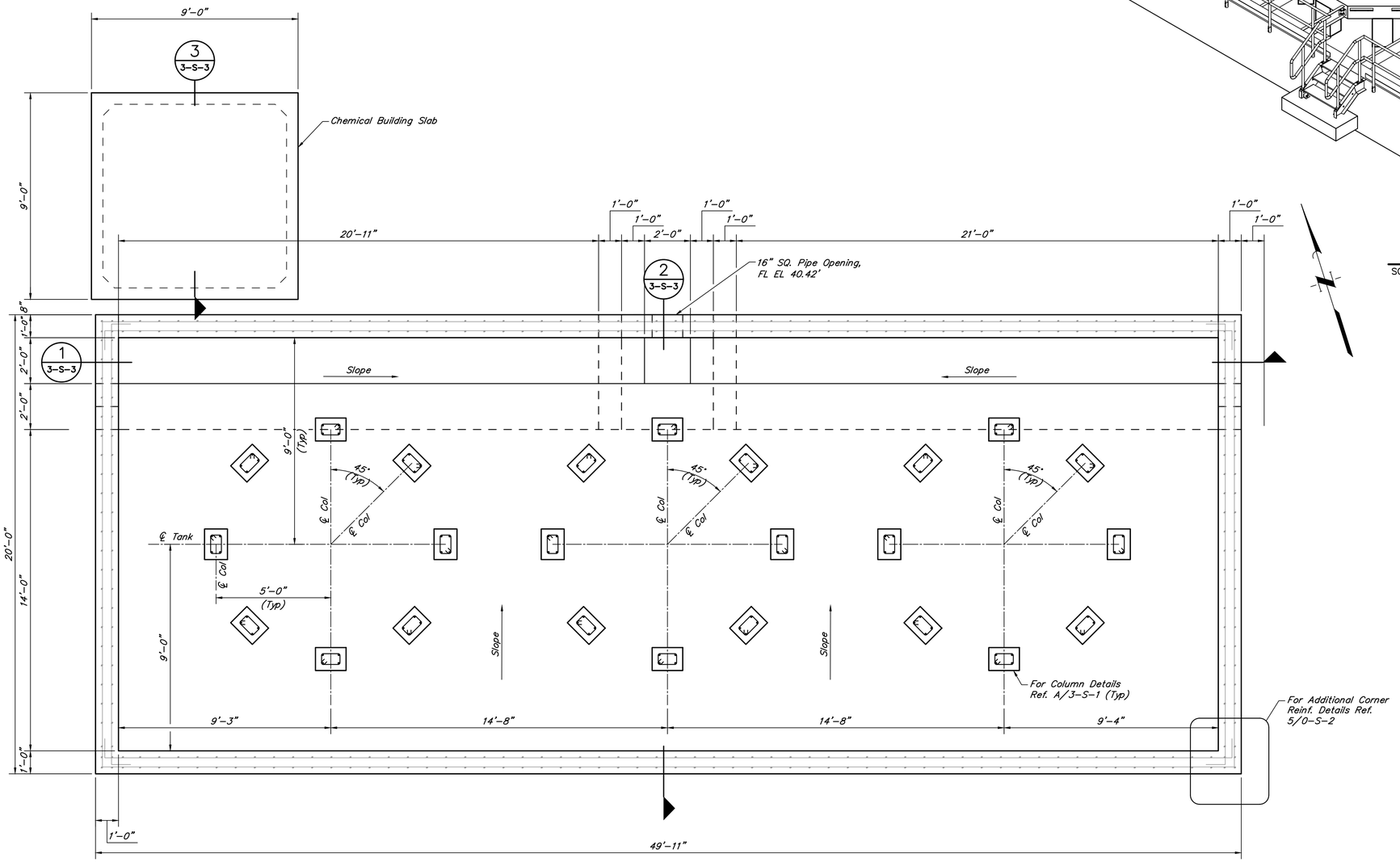
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 3-S-1 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



3D VIEW
SCALE: 1/4" = 1'-0"



FOUNDATION PLAN
SCALE: 3/8" = 1'-0"

NO.	DATE	REVISIONS	APP.

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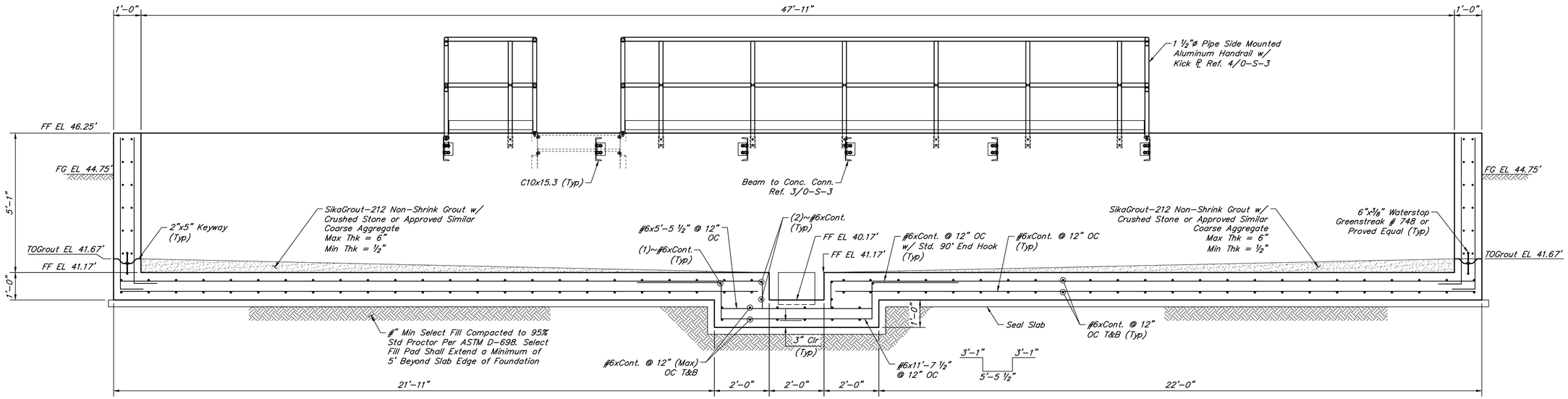
SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL STORAGE & CHEMICAL BUILDING PAD FOUNDATION SECTIONS

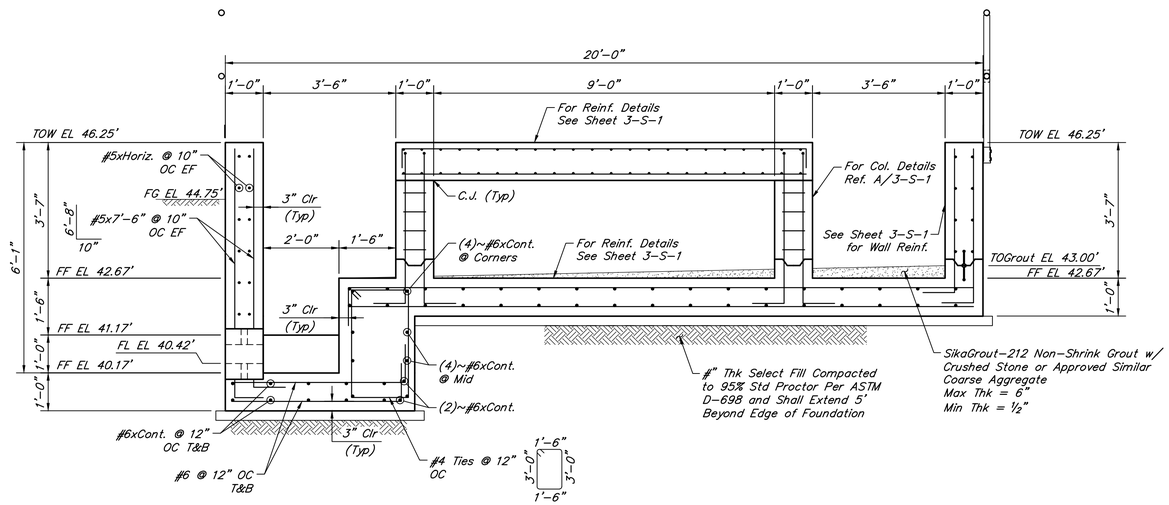
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX
CATEGORY NO. 3-S-2 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

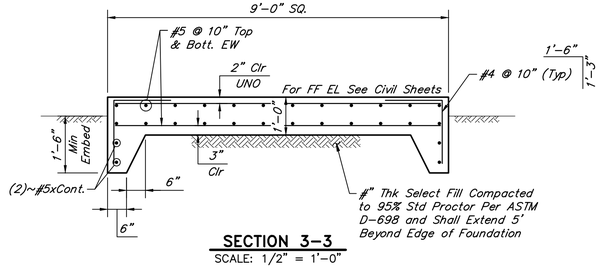
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



SECTION 1-1
SCALE: 1/2" = 1'-0"



SECTION 2-2
SCALE: 1/2" = 1'-0"



SECTION 3-3
SCALE: 1/2" = 1'-0"

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LIFT STATION REHABILITATION

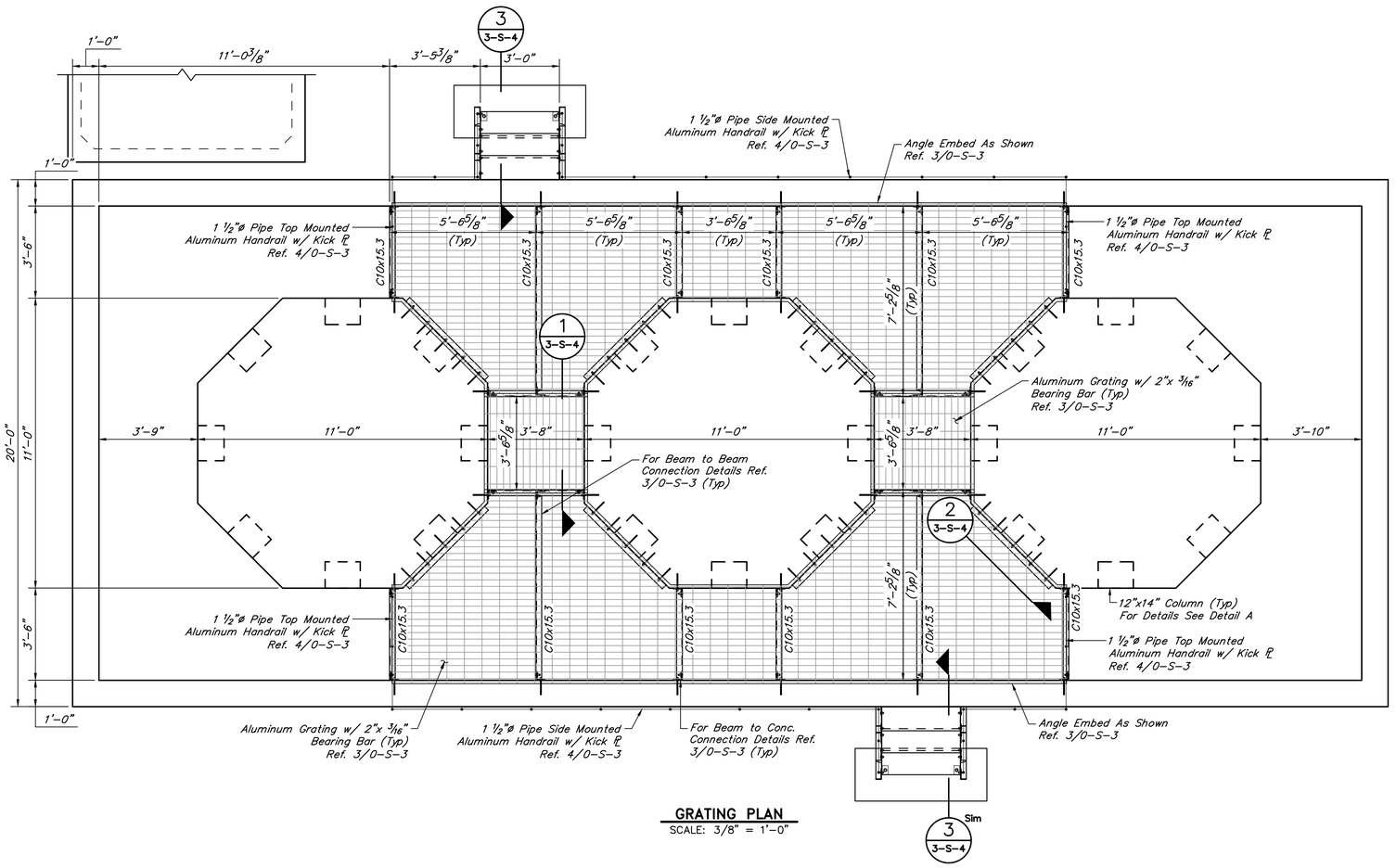
CHEMICAL STORAGE & CHEMICAL BUILDING PAD FOUNDATION SECTIONS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

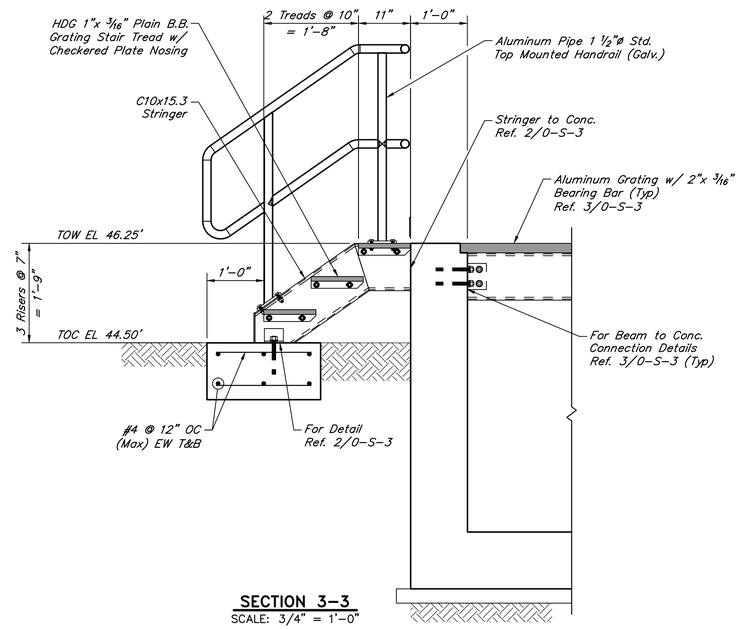
DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. 3-S-3 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

K:\00050\00050-0099-01 Scott St. No. 1 Lift Station Rehabilitation - Phase II Design\2 Design Phase\CAD\S-A3-CHEMICAL STORAGE.dwg, Jul 09, 2025 - 10:55am, sf1

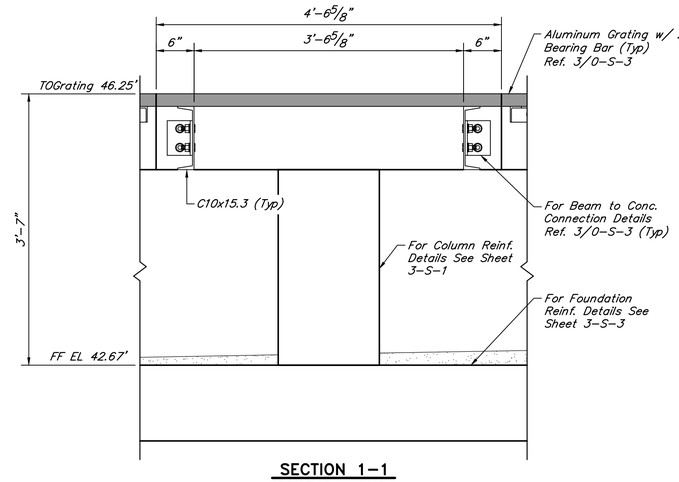
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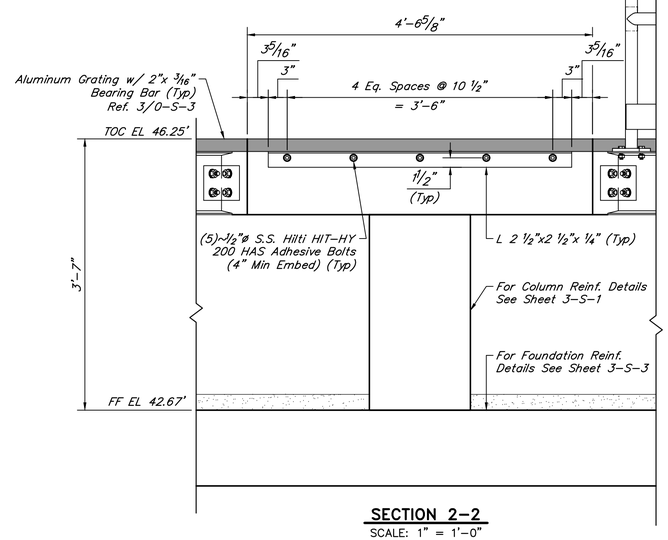
GRATING PLAN
SCALE: 3/8" = 1'-0"



SECTION 3-3
SCALE: 3/4" = 1'-0"



SECTION 1-1
SCALE: 1" = 1'-0"



SECTION 2-2
SCALE: 1" = 1'-0"

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW

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P.E. Serial No.: 132679

Date: JULY 2025

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SCOTT STREET No. 1
LIFT STATION REHABILITATION

CHEMICAL STORAGE GRATING PLAN & SECTIONS

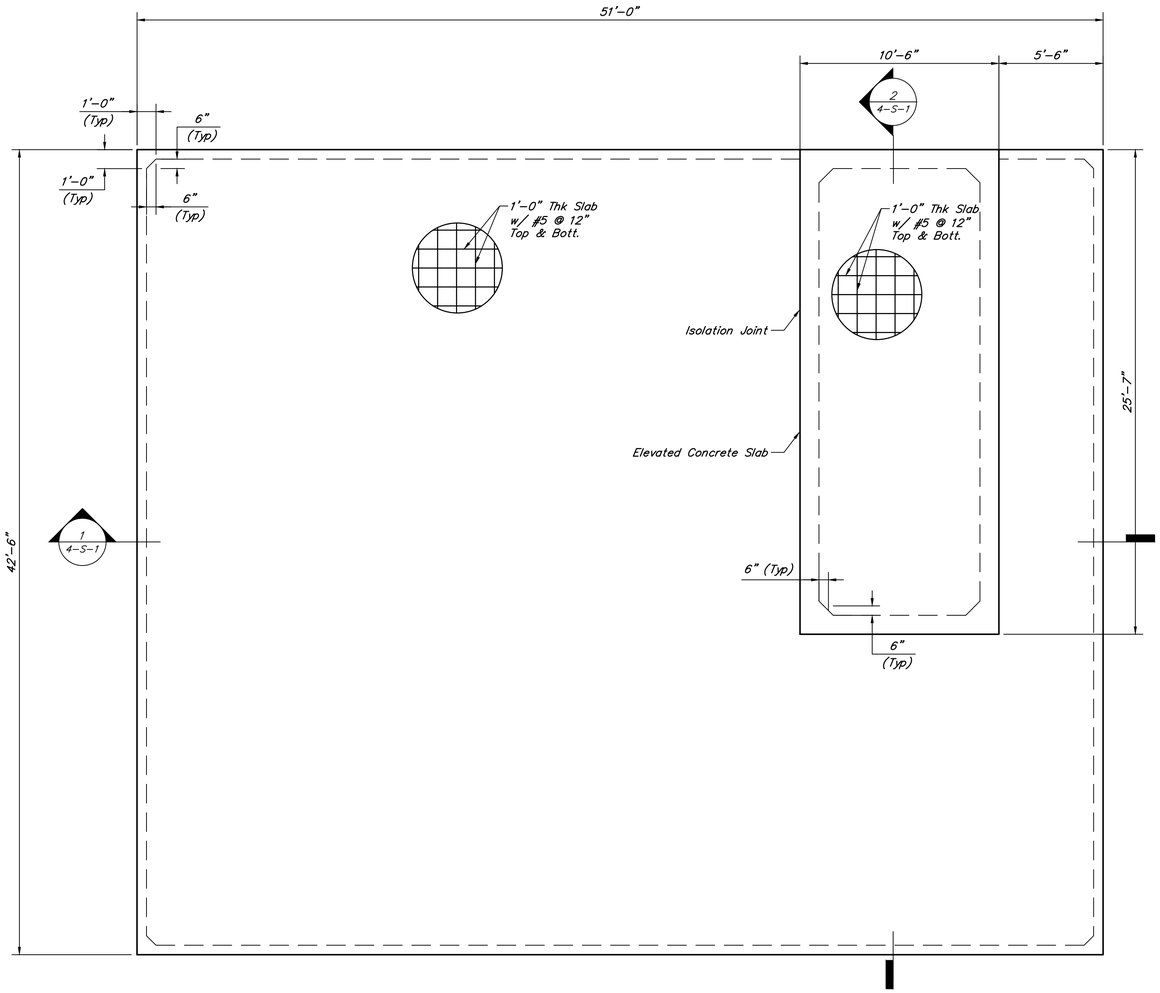
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

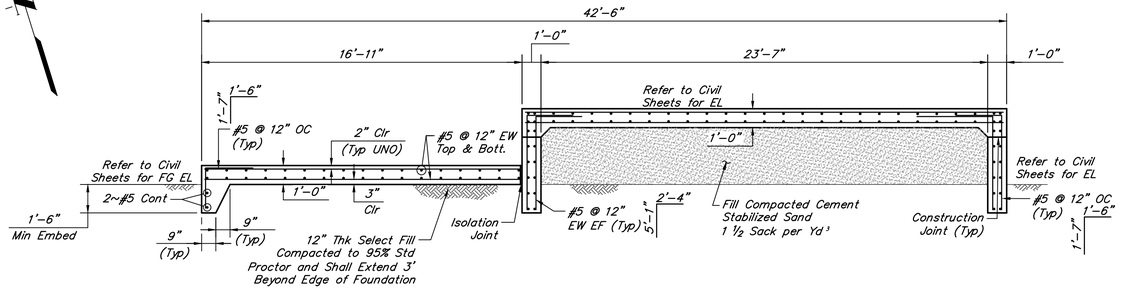
CATEGORY NO. 3-S-4 SHEET NO. # OF XXX

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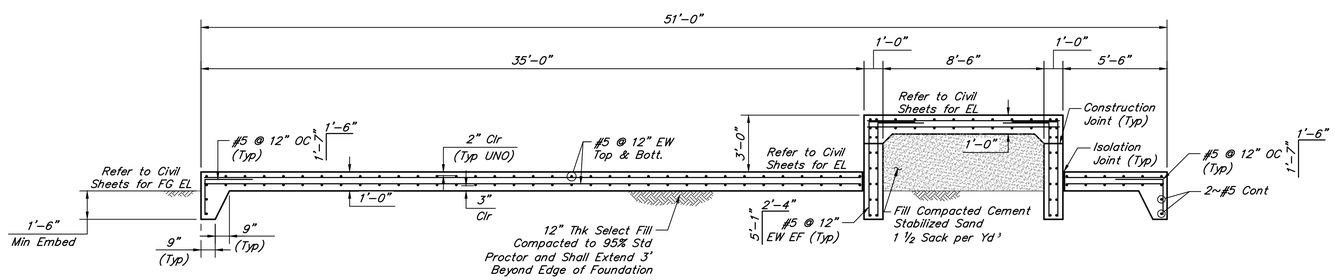
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



ODOR CONTROL STATION FOUNDATION PLAN
1/4" = 1'-0"



SECTION 2-2
1/4" = 1'-0"



SECTION 1-1
1/4" = 1'-0"

NO.	DATE	REVISIONS	APP.

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P.E. Serial No.: 132679
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: JULY 2025
JOB NO: 00050-0099-01
DGN BY: RMERHI
DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1
LIFT STATION REHABILITATION

ODOR CONTROL STATION FOUNDATION PLAN & SECTIONS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'-0" HORIZ: XXX VERT: XXX
CATEGORY NO. 4-S-1 SHEET NO. # OF XXX
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

SYMBOLS	DESCRIPTION
52 CS	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS-CONTROL SWITCH
(E.O.) TRIP FRAME	LOW VOLTAGE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED. LSIG IF NOTED MCP IF NOTED ERMS IF NOTED
✳ OR	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: ✳ FVR-FULL VOLTAGE REVERSING RVNR-REDUCED VOLTAGE NON-REVERSING 2S1W-TWO SPEED, ONE WINDING 2S2W-TWO SPEED, TWO WINDING
✳ OR	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE ✳ AMPERE RATING NOTED IF OTHER THAN 30A
✳ OR F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED: ✳ AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING
MIS OR I	MOTOR ISOLATION SWITCH, HORSEPOWER RATED
	DRAWOUT TYPE EQUIPMENT OR DEVICE
	MEDIUM VOLTAGE CABLE TERMINATION
	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH
	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER
30KVA 480V- 120/208Y K-*	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 13. ALL OTHER DRY TYPE TRANSFORMERS SHALL HAVE A K-4 RATING. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING
✳ A:5	CURRENT TRANSFORMER: ✳ QUANTITY A= PRIMARY AMPERES
✳ PV-SV	POTENTIAL TRANSFORMER: ✳ QUANTITY PV= PRIMARY VOLTAGE SV= SECONDARY VOLTAGE
	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
100A ATS-1 N S	TRANSFER SWITCH AUTOMATIC TRANSFER SWITCH (EG ATS-1) MANUAL TRANSFER SWITCH (EG MTS-1) "N" INDICATES NORMAL SOURCE "S" INDICATES STANDBY SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
✳	VARIABLE SPEED DRIVE CONTROLLER ✳ D.C.= D.C. DRIVE CONTROLLER SCR= SILICON CONTROLLED RECTIFIER VFD= VARIABLE FREQUENCY DRIVE AFD= ADJUSTABLE FREQUENCY DRIVE ASD= ADJUSTABLE SPEED DRIVE
	VACUUM CONTACTOR
5KW OR E	UNIT HEATER - ELECTRIC HEATING COIL AND FAN
5KW OR U	UNIT HEATER - STEAM OR WATER HEATING COIL AND FAN
M	MOTOR, NUMERAL INDICATES HORSEPOWER
SPD	SURGE PROTECTION DEVICE

SYMBOLS	DESCRIPTION
VM ✳	VOLTMETER (WITH SWITCH IF 3-PHASE)
AM ✳	AMMETER (WITH SWITCH IF 3-PHASE)
*	METER ✳ WM- WATTMETER WHM- WATTHOUR METER WHDM- WATTHOUR DEMAND METER WHDR- WATTHOUR DEMAND RECORDER PF- POWER FACTOR METER RT- RUNNING TIME METER TRANSDUCER AX- CURRENT TRANSDUCER WX- WATT TRANSDUCER
#	RELAY, NO. AS INDICATED 25- SYNCHRONISM CHECK RELAY 27- UNDER VOLTAGE RELAY 38- BEARING PROTECTIVE DEVICE 40- LOSS OF EXCITATION RELAY 42- RUNNING CONTACTOR/PILOT RELAY 46- REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47- PHASE SEQUENCE VOLTAGE RELAY 49- MACHINE OR TRANSFORMER THERMAL RELAY 50- INSTANTANEOUS OVERCURRENT RELAY 50G- INSTANTANEOUS GROUND 51- TIME OVER CURRENT RELAY 51G- TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51N- TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V- TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 60- NEGATIVE SEQUENCE VOLTAGE RELAY 62- TIME DELAY RELAY 63- OVER PRESSURE RELAY 67- AC DIRECTIONAL OVERCURRENT RELAY 83- AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86- LOCKING-OUT RELAY 87- DIFFERENTIAL PROTECTIVE RELAY B- SUFFIX INDICATES "BUS" G- SUFFIX INDICATES "GENERATOR" GF- GROUND FAULT ST- SHUNT TRIP T- SUFFIX INDICATES "TRANSFORMER" X- SUFFIX INDICATES "AUXILIARY"
*	SPECIAL CAPACITOR ✳ SC- SURGE CAPACITOR PF- POWER FACTOR CORRECTION CAPACITOR INCLUDING INDUCTIVE LINK AS NEEDED
	PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
E-STOP	EMERGENCY STOP PUSH BUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
✳ N	STOP PUSH BUTTON WITH RED HEAD OPERATOR (MAINTAINED CONTACT) WITH LOCKABLE OPTION ✳: E-STOP ✳: STOP
STOP START	START-STOP PUSH BUTTON CONTROL STATION (MOMENTARY CONTACT) "L" DENOTES LOCKOUT TYPE
STOP START	START-STOP PUSH BUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP
OFF ON	OFF/ON SELECTOR SWITCH
A B C ✳ (XOO) (OOX)	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED

POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT
A	X	O	O
B	0	0	O
C	0	O	X

✳ NAMEPLATE (A/B/C)
HOA- HAND/OFF/AUTO
HOR- HAND/OFF/REMOTE
LOR- LOCAL/OFF/REMOTE
RSL- RAISE/STOP/LOWER
TOA- TEST/OFF/AUTO

NOTE: 2 POSITION MULTI-CONTACT SWITCH FOLLOWS SAME CONVENTION

M#	MOTOR STARTER COIL, NUMBER AS INDICATED
CR #	CONTROL RELAY COIL, NUMBER AS INDICATED
	RVSS: REDUCED VOLTAGE SOLID STATE SOFT STARTER
	RVAT: REDUCED VOLTAGE AUTO-TRANSFORMER SOFT STARTER

SYMBOLS	DESCRIPTION
*	PILOT LIGHT, COLOR AS NOTED ✳ R- RED G- GREEN B- BLUE W- WHITE A- AMBER
* PTT	PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE.
TD	TIME DELAY RELAY RANGE AS NOTED SET POINT AS NOTED TDD-TIME DELAY AFTER DE-ENERGIZATION-OFF DELAY TDE-TIME DELAY AFTER ENERGIZATION-ON DELAY
	NOTC-NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED
	NCTO-NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED
	NOTO-NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED
	NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
⊗	FIELD INSTRUMENT, TAG NO. OR LOOP # AS INDICATED ✳INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS ## - INDICATES LOOP NO.
OR ⊗	LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSES ON RISING LEVEL NORMALLY CLOSED, OPENS ON RISING LEVEL NORMALLY OPEN, CLOSES ON DROPPING LEVEL NORMALLY CLOSED, OPENS ON DROPPING LEVEL
OR ⊗	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSES ON RISING PRESSURE NORMALLY CLOSED, OPENS ON RISING PRESSURE NORMALLY OPEN, CLOSES ON DROPPING PRESSURE NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
OR ⊗	TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSES ON RISING TEMPERATURE NORMALLY CLOSED, OPENS ON RISING TEMPERATURE NORMALLY OPEN, CLOSES ON DROPPING TEMPERATURE NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
OR ⊗	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSES ON INCREASED FLOW NORMALLY OPEN, CLOSES ON DROPPING FLOW NORMALLY CLOSED, OPENS ON INCREASED FLOW NORMALLY CLOSED, OPENS ON DROPPING FLOW
OR ⊗	POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN - HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED - HELD OPEN
OR ⊗	TORQUE SWITCH NORMALLY CLOSED, OPENS ON HIGH TORQUE
	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	CONDUCTORS ELECTRICALLY CONNECTED

SYMBOLS	DESCRIPTION
LA SC	LIGHTNING ARRESTER/SURGE CAPACITOR
OR	GROUND ROD GROUND ROD TEST WELL
30A	FUSE, AMPERE RATING AS NOTED
OR HTR	HEATER
	INDUCTOR
TG	TACHOMETER GENERATOR
	CONTACT, NORMALLY OPEN (NO)
	CONTACT, NORMALLY CLOSED (NC)
	OVERLOAD RELAY HEATER
K	KEY INTERLOCK
TB	TERMINAL OR TEST BLOCK
RTD	RESISTANCE TEMPERATURE DETECTOR
VE	VIBRATION DETECTOR
DM	DAMPER MOTOR
ETM OR	ELAPSED TIME METER
MOV	MOTOR OPERATED VALVE
o	PUSH BUTTON STATION, REFER TO ELECTRICAL SCHEMATIC FOR NUMBER OF DEVICES.
J	JUNCTION BOX
JP	POWER JUNCTION BOX
JI	4-20mA SIGNAL JUNCTION BOX
JC	CONTROL JUNCTION BOX
PB	PULL BOX
TC	TERMINATION CABINET
	REMOTE DEVICES
5	MOV WITHOUT INTEGRATED DISCONNECT
5	MOV WITH INTEGRATED DISCONNECT
	INDICATES LIMITS OF EQUIPMENT OR WIRING ENCLOSURE
MPR	(MPR) MOTOR PROTECTION RELAY

DWG: E–01

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-01 Electrical Legends and Symbols Sheet 1.dwg

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.

Signature Valid for six months.

Date:

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)

Signature Valid for six months.

Date:

Approved for AT&T Texas / SWBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.

THIS DOCUMENT IS RELEASED FOR PURPOSE OF REVIEW ONLY, UNDER THE AUTHORITY OF
RAMESH KALLURI
TEXAS P.E. NO. 68078
JULY 2025
IT IS NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

KGI Kalluri Group, Inc.
TBPE Registration No. F-665
16300 Katy Freeway, Suite 172
Houston, Texas 77094
Phone: (713)-365-9288

QUIDDITY
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
JOB NO: _____ DWG BY: RHW

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
LEGENDS AND SYMBOLS
SHEET 1

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

SYMBOLS	DESCRIPTION
A LA-3 b	REFER TO LIGHT FIXTURE SCHEDULE FOR TYPE FIXTURE: "A"- FIXTURE TYPE "b"- CONTROLLED BY SWITCH "b" "LA-3"- CIRCUIT 3 FROM PANEL LA
b A LA-3	REFER TO LIGHT FIXTURE SCHEDULE FOR TYPE FIXTURE, NOTATIONS SAME AS ABOVE
LA-3 OR A NS A LA-3	INDICATES LIGHT FIXTURES WHICH ARE NONSWITCHED, NOTATIONS SAME AS ABOVE "NS" - NONSWITCHED
LA-3 A b	WALL MOUNTED LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
LA-3 A b	POLE MOUNTED LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
A LA-3	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS, NOTATIONS SAME AS ABOVE
A	REMOTE EMERGENCY ADJUSTABLE WALL LIGHTING FIXTURE WITH TWO LAMP HEADS, NOTATIONS SAME AS ABOVE
A LA-3	CEILING MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE
A LA-3	WALL OUTLET EXIT SIGN. ARROW INDICATES DIRECTION OF EGRESS, NOTATIONS SAME AS ABOVE
	CONDUIT, EXPOSED/SURFACE MOUNTED
	CONDUIT OR DUCTBANK, CONCEALED
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING UP
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING DOWN
	CONDUIT STUBBED OUT AND CAPPED
	FLEXIBLE METAL CONDUIT "WHIP" (2#12, #12G, 3/4"C UNLESS OTHERWISE NOTED) FOR RECESSED LIGHTING FIXTURES AND LIQUID TIGHT MOTOR CONNECTIONS
LP#-1,3	HOMERUN, CIRCUITS 1 AND 3 RUN TO PANEL LP-1
$b	SINGLE POLE SWITCH "b"- INDICATES SWITCH LEG SHALL CONTROL LIGHT FIXTURES WITH "b" DESIGNATION
$b x	MULTI POLE SWITCH "x"- INDICATES NUMBER OF POLE "b"- NOTATIONS SAME AS ABOVE
$b P	SINGLE POLE SWITCH AND PILOT LIGHT, "b"- NOTATIONS SAME AS ABOVE
$b D	DIMMER LIGHTING CONTROL SWITCH, "b"- NOTATIONS SAME AS ABOVE
$b TM	TIME SWITCH, "b"-NOTATIONS SAME AS ABOVE
$ M	MANUAL MOTOR STARTER /DISCONNECT
$ OS	SINGLE POLE SWITCH WITH OCCUPANCY SENSOR
$ DM	SINGLE POLE DIMMER SWITCH
$ xx	SWITCH ENCLOSURE "x"- NOTATIONS SAME AS ABOVE "b"- NOTATIONS SAME AS ABOVE "xx"- INDICATES ENCLOSURE TYPE
LC-1	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED

SYMBOLS	DESCRIPTION
L*-## OR L*-##	LIGHTING PANELBOARD (TYPICAL 120V/240V OR 120V/208V)
H*-## OR H*-##	DISTRIBUTION PANELBOARD (TYPICAL 277V/480V)
LA-3	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W GFI- GROUND FAULT INTERRUPTER TYPE WP- WEATHERPROOF "LA-3"- CIRCUIT 3 FROM PANEL LA
	WELDING RECEPTACLE
	20A, 240V, 2P, 3W, RECEPTACLE
	CLASS 1, DIVISION 1, RATED TWIST LOCK RECEPTACLE, VOLTAGE AND AMPERAGE RATING AS NOTED
	SINGLE FACE, SINGLE GANG PEDESTAL WITH 20A, 120V, 2P, 3W DUPLEX RECEPTACLE, FURNISHED AND INSTALLED UNDER DIVISION 16 UNLESS OTHERWISE NOTED. * DENOTES FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS BUT INSTALLED UNDER DIVISION 16
D	DOUBLE FACE, SINGLE GANG PEDESTAL WITH 20A, 120V, 2P, 3W DUPLEX RECEPTACLE AND 20A, 240V, 2P, 3W SINGLE RECEPTACLE, FURNISHED AND INSTALLED UNDER DIVISION 16 UNLESS OTHERWISE NOTED. * DENOTES FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS BUT INSTALLED UNDER DIVISION 16
	DOUBLE RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED IN BOX CURB FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS BUT INSTALLED UNDER DIVISION 16
	SINGLE GANG 20A, 120V, 3P, 3W RECEPTACLE
	QUAD RECEPTACLE
OS	OCCUPANCY SENSOR CAPABLE OF VACANCY
PC	PHOTOCELL

SYMBOLS	DESCRIPTION
COMMUNICATIONS SYSTEMS	
	TELEPHONE OUTLET
	DATA OUTLET
P	DATA INPUT/OUTPUT CABLE OUTLET. "P" DENOTES PROCESS COMPUTER SYSTEM
	VOICE/DATA OUTLET
S	PAGING SPEAKER HORN
S	PAGING SPEAKER BI-DIRECTIONAL
S	PAGING SPEAKER, CEILING MOUNTED TYPE
S	PAGING SPEAKER, WALL MOUNTED TYPE
SECURITY SYSTEMS	
SAP	SECURITY ALARM PANEL
DS	SECURITY ALARM DOOR SWITCH
KP	SECURITY ALARM KEY PAD
CR	SECURITY SYSTEM CARD ACCESS READER
WS	SECURITY ALARM WINDOW SWITCH
MD	SECURITY ALARM MOTION DETECTOR
	SECURITY CAMERA CCTV- CLOSED CIRCUIT TV CAMERA PTZ- PAN, TILT, ZOOM CAMERA LENS CONTROLS
GB	GLASS BREAK DETECTOR
ACP	ACCESS CONTROL PANEL
FIRE ALARM SYSTEMS	
FACP	FIRE ALARM CONTROL PANEL
SD	SMOKE DETECTOR D- DENOTES DUCT SMOKE DETECTOR R- DENOTES FIXED TEMPERATURE RATE-OF-RISE TYPE.
F	FIRE ALARM MANUAL PULL STATION, MOUNT AT 4'-0"
	ALARM HORN, MOUNT AT 7'-6" F- DENOTES FIRE ALARM
	ALARM STROBE, MOUNT AT 6'-8" F- DENOTES FIRE ALARM
	ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT AT 6'-8" F- DENOTES FIRE ALARM

ABBREVIATIONS

AC	ALTERNATING CURRENT
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GRADE
ALUM	ALUMINUM
AMP/A	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DOOR INTERLOCK
DN	DOWN
DWG	DRAWING
EHH	ELECTRICAL HANDHOLE
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
EMH	ELECTRICAL MANHOLE
EO	ELECTRICALLY OPERATED
ERMS	ENERGY-REDUCING MAINTENANCE SWITCH
FBO	FURNISHED BY OTHERS
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED POLYESTER
FU	FUSE
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
G, GRD	GROUND
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GO	GATE OPERATOR
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HT	HEIGHT
HTP	HEAT TRACE PANEL
HZ	HERTZ
IMH	INSTRUMENT MAN HOLE
INST	INSTRUMENT
LA	LIGHTNING ARRESTER
LC	LIGHTNING CONTACTOR
LCP	LOCAL CONTROL PANEL
LGTS	LIGHTS
LP	LIGHTING PANEL
	CONTINUED ABOVE RIGHT

	CONTINUED BELOW LEFT
LSIG	LONG TIME/SHORT TIME/ INSTANTANEOUS/GROUND FAULT FEATURE INCLUDED
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTG	MOUNTING
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
OL	OVERLOAD
OLX	OVERLOAD CONTROL RELAY
PB	PUSH BUTTON OR PULL BOX
PCC	PUMP CONTROL CONSOLE
PPR	PHASE PROTECTIVE RELAY
PFR	PHASE FAILURE RELAY
PH	PHASE
PNLBD	PANELBOARD
PR	PAIR
PT	POTENTIAL TRANSFORMER
PTT	PUSH TO TEST TYPE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RCP	RELAY CONTROL PANEL
RECP	RECEPTACLES
RVSS	REDUCED VOLTAGE SOFT STARTER
SC	SURGE CAPACITOR
SCH	SCHEMATIC
SCCR	SHORT CIRCUIT CURRENT RATING
SEC	SECONDS OR SECONDARY
SH	SHIELDED OR SHEET
SHT	SHEET
SM	MOTOR RATED SWITCH
SN	SOLID NEUTRAL
SS	STAINLESS STEEL
ST	STARTER
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TERMINATION CABINET
TEL	TELEPHONE
TO	TIME DELAY ON OPENING
TS	TEMPERATURE SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TSW	TWISTED SHIELDED WIRE
TYP	TYPICAL
UG	UNDERGROUND
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
VO	VALVE OPERATOR
W	WIRE
WP	WEATHERPROOF
XP	EXPLOSION PROOF
XFMR	TRANSFORMER

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VERIFICATION OF PRIVATE UTILITY LINES

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CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.

Signature Valid for six months.

Date:

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)

Signature Valid for six months.

Date:

Approved for AT&T Texas / SWBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.

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TEXAS P.E. NO. 68078
JULY 2025
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE:
JOB NO:
DGN BY: RHW
DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
LEGENDS AND SYMBOLS
SHEET 2

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

DWG: E-02

C:\Users\Howard\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-02 Electrical Legends and Symbols Sheet 2.dwg

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

ELECTRICAL GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND IN ACCORDANCE WITH LOCAL CODES.
2. ALL PROPOSED ELECTRICAL EQUIPMENT THAT SERVE THE FACILITY SHALL BE ELEVATED TO ATLEAST 3FT ABOVE THE 500 YEAR FLOOD PLAIN ELEVATION. 500 YEAR FLOOD ELEVATION IS EL.32.00.
3. THE NOTES CONTAINED ON THIS SHEET ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR WHEN WORKING IN THE FIELD, AND CONTAIN EXCERPTS FROM THE SPECIFICATION SECTIONS. HOWEVER THE CONTRACTOR IS HEREBY ADVISED THAT THE CONTRACT DOCUMENTS CONSIST OF BOTH THE DRAWINGS AND THE SPECIFICATIONS, AND THAT THE CONTRACTOR MUST COMPLY FULLY WITH BOTH THE BOUND DRAWINGS AND THE BOUND SPECIFICATIONS.
4. ALL EQUIPMENT WIRING, RACEWAYS, ETC. SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), LOCAL CODES, AND INDUSTRY STANDARDS (IE. UL, NEMA, IEEE, ANSI, ETC.) THE DRAWING NOTES AND DETAILS SHALL BE COMPLIED WITH IN ADDITION TO THE REQUIREMENTS IN THE SPECIFICATIONS. REFER TO EACH SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS.
5. ALL RACEWAY INSTALLATIONS SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. ALL EXPOSED RACEWAY SHALL BE INSTALLED PARALLEL TO BEAMS, CEILINGS, FLOORS AND WALLS. SEE SPECIFICATION ON RACEWAYS FOR ADDITIONAL REQUIREMENTS.
6. CONDUITS SHALL BE TERMINATED IN A WORKMANSHIP LIKE MANNER AND STRICTLY IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWING DETAILS.
7. CONDUITS TERMINATED INTO ENCLOSURES SHALL BE PERPENDICULAR TO THE WALLS OF THE ENCLOSURE. THE USE OF SHORT SEAL TIGHT ELBOW FITTINGS FOR SUCH TERMINATIONS IS NOT PERMITTED.
8. ALL RACEWAY INSTALLATIONS, CROSSING EXPANSION JOINTS OR TRANSITIONS FROM BELOW GRADE TO EXPOSED ABOVE GRADE, SHALL HAVE EXPANSION OR EXPANSION/DEFLECTION TYPE FITTINGS AS SPECIFIED FOR THE APPLICATION. SEE THE DRAWINGS AND THE SPECIFICATION ON RACEWAYS FOR THE EXACT TYPE OF FITTING TO BE USED.
9. NO CONDUIT SMALLER THAN 3/4" IS ALLOWED, EXCEPT WHERE REQUIRED TO ENTER A SPECIFIC DEVICE OR INSTRUMENT. POWER CONDUCTOR SHALL #12 AWG MINIMUM. CONDUCTORS SMALLER THAN #12 AWG IN DUCT BANK SHALL BE IN MULTI-CONDUCTOR CABLES. ALL CABLES ROUTED UNDERGROUND SHALL BE RATED FOR WET ENVIRONMENT.
10. ALL UNDERGROUND DUCT BANKS SHALL BE SCH 80 RIGID PVC CONDUIT, ENCASED IN REBAR REINFORCED RED CONCRETE. CONCRETE SHALL BE DYED RED, IN THE TRUCK, BEFORE PLACEMENT. COORDINATE ROUTING OF NEW CONDUIT AND DUCT BANKS TO AVOID INTERFERENCE WITH EXISTING CONDUIT, DUCT BANKS, AND OTHER UNDERGROUND UTILITIES.
11. ALL CHANGES OF DIRECTION GREATER THAN 10 DEGREES IN UNDERGROUND DUCT BANKS SHALL BE ACCOMPLISHED USING PVC COATED RIGID ALUMINUM FACTORY BENDS. BENDS OF PVC CONDUIT GREATER THAN 10 DEGREES, OR THE USE OF FLEXIBLE CONDUIT OF ANY TYPE, IS NOT BE PERMITTED. SEE THE SPECIFICATIONS FOR MORE REQUIREMENTS.
12. LIQUID TIGHT FLEXIBLE ALUMINUM CONDUIT SHALL BE USED FOR THE PRIMARY AND SECONDARY OF TRANSFORMERS, GENERATOR TERMINATIONS AND OTHER EQUIPMENT WHERE VIBRATION IS PRESENT. USE IN CONDUIT RUNS IS NOT PERMITTED. LIQUID TIGHT FLEXIBLE ALUMINUM CONDUIT SHALL HAVE A MAXIMUM LENGTH OF 3 FEET. THE MAXIMUM BENDING RADIUS SHALL NOT BE LESS THAN THAT SHOWN IN THE NEC CHAPTER 9, TABLE 2.
13. THE WIRING DIAGRAMS, BLOCK DIAGRAMS, QUANTITY/SIZES OF WIRES/CONDUITS PRESENTED IS BASED UPON THE SELECTED DESIGN EQUIPMENT. DEVIATIONS FROM THE DESIGN CRITERIA IS ACCEPTABLE IF SUBMITTED EQUIPMENT IS COMPLIANT WITH THE RELATED PERFORMANCE SPECIFICATIONS, IS APPROVED AND CONTRACTOR MAKE THE REQUIRED CHANGES THROUGH SUBMITTAL PROCESS AND PROVIDES SUPPORTING DOCUMENTS FOR THE CHANGES REQUIRED AT THE CONTRACTOR'S EXPENSE. ALL MODIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFIED.
14. WHERE ENVIRONMENT CONTAINS "GASES" SEAL ALL RACEWAYS ENTERING JUNCTION BOXES OR CONTROL PANELS. REFER TO THE SPECIFICATIONS FOR DETAILS.
15. ALL EQUIPMENT AND ENCLOSURE LOCATIONS ARE APPROXIMATE, BASED ON DESIGN EQUIPMENT. THE ULTIMATE LOCATIONS SHALL BE COORDINATED DURING CONSTRUCTION.
16. EQUIPMENT, ENCLOSURES, TERMINAL AND JUNCTION BOX DIMENSIONS SHALL BE COORDINATED WITH ACCEPTED EQUIPMENT AND VERIFIED WITH EQUIPMENT SUPPLIERS.
17. CORING OF AN EXISTING STRUCTURE SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER & ENGINEER. CORING THROUGH STRUCTURAL BEAMS IS STRICTLY PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER/ENGINEER.
18. PROVIDE CONDUIT SEALS FOR CONDUIT PENETRATIONS AS PER NFPA 70 (NEC) AND NFPA 820.
19. ALL STRUT (SLOTTED CHANNEL), WASHERS, SCREWS, NUTS, CONDUIT CLAMPS, ALL THREAD SPRING NUTS AND MISC. MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.
20. LIGHTING FIXTURES SHALL BE MOUNTED ACCORDING TO THE MOUNTING HEIGHT GIVEN ON THE DRAWINGS. THE MOUNTING HEIGHT SHALL BE MEASURED FROM THE BOTTOM OF THE LIGHTING FIXTURE TO THE FINISHED FLOOR.
21. CONDUIT AND WIRE FOR THE HVAC EQUIPMENT AND MISCELLANEOUS DEVICES SHALL BE:
    A. 3/4" (MIN) RIGID ALUMINUM.
    B. NO.14 XHHW CU. WIRE XHHW (MIN.).
    C. IN ACCORDANCE WITH ALL ELECTRICAL AND HVAC SPECIFICATIONS REQUIREMENTS.
25. CONDUITS AND WIRES SHOWN ON THE INTERFACE DIAGRAM SHALL BE INSTALLED BY THE CONTRACTOR. GROUPING OF CONDUIT AND WIRE MAY BE CHANGED, IF APPROVED BY THE ENGINEER AND OWNER.
26. ALL CONDULETS SHALL BE FORM 7 AND SHALL HAVE 316 SS CLAMP COVERS WITH 316 SS CLAMPS AND SCREWS. SCREW DOWN COVERS ARE UNACCEPTABLE. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.
27. ALL BARE GROUNDING CONDUCTORS SHALL BE COPPER, ALL GROUND RODS SHALL BE 3/4" BY 10' LONG. ALL EXPOSED COPPER GROUND CABLES SHALL BE GREEN INSULATED CONDUCTORS. PROVIDE XHHW INSULATION.
28. WHERE NOTES ON THE DRAWING INDICATE THAT THE CONTRACTOR SHALL FIELD-VERIFY, THE INTENT IS FOR THE CONTRACTOR TO INVESTIGATE TO THE EXTENT NECESSARY TO PROVIDE THE WORK AND MATERIALS PRIOR TO BIDDING AND INCLUDE ALL COSTS IN THE BID PRICE. THE CONTRACT PRICE SHALL NOT BE INCREASED WHEN THE CONTRACTOR HAS NOT INVESTIGATED PER THE NOTES DIRECTING THAT BE DONE.

TYPICAL ENCLOSURE TYPES BY AREA TYPE

NON-HAZARDOUS AREAS	BOXES & ENCLOSURES 1	3R	4X	4X*	12	CONDUIT
OUTDOOR; GENERAL AREAS		X	X			RIGID ALUMINUM
OUTDOOR; CHEMICAL AREAS				X		SCHEDULE 80 PVC
INDOOR; CHEMICAL ROOM				X		SCHEDULE 80 PVC
INDOOR; CONDITIONED SPACE					X	RIGID ALUMINUM
INDOOR; NON-CONDITIONED SHOP SPACE					X	RIGID ALUMINUM
INDOOR; NON-CONDITIONED PROCESS AREA			X			RIGID ALUMINUM
INDOOR, ADMIN BUILDING	X					EMT/RIGID ALUMINUM
CLASS I, DIVISION 1	REFER TO NEC, NFPA-820, AND CONTRACT CONSTRUCTION SPECIFICATIONS					
CLASS I, DIVISION 2	REFER TO NEC, NFPA-820, AND CONTRACT CONSTRUCTION SPECIFICATIONS					

GENERAL NOTES:

- EQUIPMENT SUCH AS MOTOR CONTROL CENTER, SWITCHGEAR, ASDS, AND OTHER STAND-ALONE MOTOR STARTERS ARE TO BE SPECIFIED UNIQUELY.
- NEMA 1 ENCLOSURES ARE TO BE NEMA 1 GASKETED.
- UNLESS CALLED OTHERWISE, NEMA 4X* ENCLOSURES ARE TO BE NON-METALLIC (ie PVC) NEMA 4X
- CONDUIT INSIDE ADMIN BUILDING LOCATION IS TO BE EMT IF CONCEALED IN DRY WALL (AKA SHEET ROCK WALL): OTHERWISE RIGID ALUMINUM.
- OUTDOOR GENERAL AREAS COULD BE 3R OR 4X DEPENDING ON OWNER PREFERENCE - REFER TO DRAWINGS.

ELECTRICAL EARLY WORK SCOPE & GENERAL NOTES

1. AS FOUND, EXISTING OPERATIONAL STATUS, RESEARCH SHALL BE PERFORMED. A REPORT SHALL BE CREATED, SUBMITTED AND ACCEPTED PRIOR TO ANY DISCONNECTION OR INSTALLATION. SEE AS FOUND DOCUMENTATION NOTES ON THIS SHEET.
2. A TEMPORARY POWER PLAN SHALL BE CREATED BY THE CONTRACTOR, SUBMITTED UNDER SPECIFICATION 16060 AND ACCEPTED BY THE OWNER'S PROJECT MANAGEMENT TEAM PRIOR TO ANY WORK BEING DONE ON THE SITE.
3. A TEMPORARY SERVICE RACK SHALL BE CONSTRUCTED, AND PARALLEL CONNECTED, TO THE EXISTING SERVICE SEE EXISTING ONE LINES FOR MORE INFORMATION. CONTRACTOR SHALL COORDINATE WITH CENTERPOINT FOR A VERY SHORT TERM OUTAGE TO CONNECT THE TEMPORARY SERVICE. ALL TEMPORARY FACILITIES SHALL BE INSTALLED IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE AND IN ACCORDANCE WITH LOCAL REQUIREMENTS.
4. TEMPORARY POWER IS TO BE ROUTED OVERHEAD, FROM THE TEMPORARY SERVICE RACK, TO THE LIFT STATION CONTROL BUILDING. 480V AND 120V POWER PANELS AND DISTRIBUTION PROVISIONS SHALL BE INSTALLED IN THE LIFT STATION ELECTRICAL ROOM, SEE PLANS FOR MORE INFORMATION. SUMP PUMPS, VENTILATION AND LIGHTING SHALL BE PROVIDED POWER AND CONTROL. MODIFICATIONS TO EXISTING EQUIPMENT MAY BE MADE FOR TEMPORARY USE, IF CLEARLY DEFINED IN THE "TEMPORARY POWER PLAN". ENSURE A SAFE WORKPLACE, ON THE SITE AND IN THE LIFT STATION BUILDING. ALL INDOOR LIGHTING AND VENTILATION SHALL BE IN ACCORDANCE WITH OSHA SAFE WORKPLACE REQUIREMENTS.
5. ALL CONTROL BUILDING EXTERIOR WALL PACKS AND SITE LIGHTING FIXTURES SHALL BE PROVIDED TEMPORARY POWER, TO KEEP THE SITE LIT AS IF NO WORK IS GOING ON THERE. CONTRACTOR SHALL CONNECT TEMPORARY POWER TO THE EXISTING LIGHTING CONDUCTORS, AND EXISTING CONTROLS ARE TO BE UTILIZED. A DARK SITE AT NIGHT IS NOT ACCEPTABLE. THE TWO SUMP PUMP SYSTEMS ARE TO EACH HAVE THE CONTROLLERS RELOCATED UP TO MOTOR LEVEL AND FED TEMPORARY POWER.
6. TEMPORARY POWER IS TO BE ROUTED AROUND THE SOUTH SIDE OF THE SITE TO THE RELOCATED EXISTING ODOR CONTROL SYSTEM. IT IS TO BE PROVIDED TEMPORARY POWER PROVISIONS PRIOR TO THE SYSTEM BEING RELOCATED. EXISTING ELECTRICAL EQUIPMENT AND COMPONENTS THAT SERVE THE EXISTING FACILITY MAY BE UTILIZED FOR TEMPORARY OPERATION.
7. THE DRY WEATHER STATION WILL REQUIRE TEMPORARY OPERATION ON EITHER TEMPORARY POWER PROVISIONS OR PROPOSED EQUIPMENT, DEPENDENT ON CONTRACTOR'S TEMPORARY PLAN, SEQUENCE SCHEDULE, MEANS AND METHODS.
8. DURING THE DRY WEATHER LIFT STATION WET WELL STRUCTURAL REHABILITATION ALL OF THE RELATED EXISTING ELECTRICAL SHALL BE REMOVED AND REPLACED.

AS FOUND DOCUMENTATION NOTES

1. DO NOT START WORK OR MAKE ANY MODIFICATIONS TO EXISTING EQUIPMENT UNTIL THE FOLLOWING "AS FOUND" RECORD OF CONDITION HAS BEEN DONE:
    A. THE OWNER AND CONTRACTOR SHALL WALK THE SITE TOGETHER WITNESS AND RECORD THE OPERATION CONDITION OF ALL THE EXISTING EQUIPMENT RELATED TO THIS PROJECT. THE CONTRACTOR SHALL NOTE ANY DEFECTS, DEFICIENCIES OR DEVIATIONS FROM THE DRAWINGS.
    B. THE OWNER SHALL OPERATE THE EQUIPMENT TO DEMONSTRATE THE CURRENT CONDITIONS. THE CONTRACTOR SHALL NOTE DOWN ANY DEFECTS OR DEFICIENCIES. LIKEWISE THE OWNER SHALL NOTIFY THE CONTRACTOR OF ANY CHANGE IN OPERATIONAL EQUIPMENT STATUS DURING THE CONSTRUCTION PROJECT.
    C. THE WRITTEN AND PHOTOGRAPHIC "AS FOUND" RECORD OF OPERATIONAL STATUS AND EXISTING CONDITION SHALL BE KEPT IN THE OWNER/CONTRACTOR TRAILER, FOR GENERAL INFORMATIONAL USAGE AND PROOF OF STATUS.
    D. CONTRACTOR SHALL REPLACE ALL MATERIAL OR EQUIPMENT DAMAGED AS A RESULT OF PROJECT WORK.
    E. AFTER CHANGES ARE MADE, IN THE OPERATIONAL STATUS OF EQUIPMENT, THE RECORD OF CONDITIONS SHALL BE UPDATED. REMOVAL FROM SERVICE, TEMPORARY SERVICE STARTING, AND FINAL CONNECTIONS SHALL ALL BE INSPECTED AND DOCUMENTED THAT IT FUNCTIONS CORRECTLY.
    F. EXISTING OR SEGMENTS OF EXISTING CONDUIT AND CONDUCTORS MAY BE FOR TEMPORARY FACILITIES. EXISTING CONCRETE EMBEDDED CONDUIT MAY BE USED FOR NEW CONDUCTORS ONLY WITHOUT SPECIFIC APPROVAL FROM THE OWNER/ENGINEER ON A CASE-BY-CASE BASIS.

DEMOLITION NOTES

1. DEMOLITION INCLUDES BUT IS NOT LIMITED TO; THE REMOVAL OF ELECTRICAL EQUIPMENT, DEVICES, CONDUCTORS, CONDUIT, SUPPORTS, AND ANCHORS. THE ELECTRICAL REMOVALS SHALL BE COORDINATED WITH OTHER TRADES AND THE CONSTRUCTION SCHEDULE. THE DRAWINGS ILLUSTRATE THE ENGINEER'S INTENT AND GENERAL SCOPE OF THE DEMOLITION WORK. NOT ALL ITEMS TO BE REMOVED MAY NOT BE SHOWN. FIELD VERIFY, AND INCLUDE ALL DEMOLITION WORK IN THE CONTRACT PRICE.
2. PRIOR TO ANY EQUIPMENT REMOVALS PROVIDE AND TEST TEMPORARY POWER, CONTROL, AND COMMUNICATION PROVISIONS.
3. PROVIDE ALL SUPPORTS, CONDUIT, CONDUCTORS AND FLEXIBLE CONDUIT FINAL CONNECTIONS REQUIRED, FOR THE TEMPORARY OR RELOCATED EQUIPMENT TO BE PLACED INTO SERVICE.
4. RELOCATE AND RECONNECT POWER AND CONTROL RACEWAYS AND CONDUCTORS TO ANY EQUIPMENT AFFECTED BY THE DEMOLITION OR RELOCATION WORK.
5. ALL CONDUCTORS SHALL BE DISCONNECTED AND REMOVED FROM THE SOURCE TO THE LOAD. ALL CONDUIT SUPPORTS, HARDWARE AND ANCHORS SHALL BE REMOVED. UNDERGROUND DUCT BANKS, NOT BEING REMOVED, SHALL BE PROVIDED A DUCT BANK MARKER AT DEAD END AND CAPPED AND TAGGED AS SPARE ON THE STUB UP END. CLEARLY INDICATING THE LOCATION OF THE OTHER END.
6. COORDINATE WITH THE GENERAL CONTRACTOR TO REPAIR ALL SURFACES WHERE DEMOLISHED EQUIPMENT OR CONDUIT WAS REMOVED. SURFACES SHALL BE CLEANED, PATCHED AND PAINTED TO MATCH THE SURROUNDING SURFACE.
7. EXISTING CONCRETE ENCASED CONDUIT MAY BE REUSED ONLY IF ACCEPTED BY THE ENGINEER. CONDUIT MUST BE OF THE SAME TYPE SPECIFIED FOR NEW WORK ON THIS CONTRACT.
8. THE OWNER HAS THE RIGHT OF FIRST REFUSAL TO THE EQUIPMENT BEING REMOVED. THE CONTRACTOR SHALL DELIVER THE EQUIPMENT WHICH THE OWNER WISHES TO KEEP AT A LOCATION DESIGNATED BY THE OWNER. SEE SPECIFICATIONS.

ELECTRICAL PROPOSED WORK SCOPE GENERAL DESCRIPTION

1. DESIGN, SUBMIT, AND INSTALL COMPLETE TEMPORARY FACILITIES SYSTEMS TO SUPPORT THE CONTRACTOR'S TEMPORARY LIFT STATION BYPASS AND OUTAGE PLANS.
2. THE DRY WEATHER STATION SHALL BE PROVIDED A COMPLETE RESTORATION. ALL NEW PUMPS, CABLE SUPPORTS, SEALS, INSTRUMENTS, FLOATS, AND TERMINATION BOXES. ALL NEW EXPOSED CONDUIT, TAGS, SUPPORTS, FLEXIBLE FINAL CONNECTIONS, NAMEPLATES AND LABELS.
3. THE WET WEATHER STATION CONTROL BUILDING SHALL BE PROVIDED A COMPLETE ELECTRICAL RESTORATION, ADDITION OF A BRIDGE CRANE, ALL NEW HVAC EQUIPMENT, ALL NEW VENTILATION AND MISCELLANEOUS IMPROVEMENTS. VERTICAL SHAFT DRIVEN PUMPS ARE TO BE REMOVED AND THE NEW DRY PIT SUBMERSIBLE PUMPS ARE TO BE RELOCATED, COORDINATE NEW CONDUIT LOCATIONS WITH MECHANICAL. DRY PIT SUBMERSIBLE FACTORY PUMP CABLE SUPPORTS SHALL BE COORDINATED WITH STRUCTURAL AND MECHANICAL. NEW INSTRUMENTS, FLOATS, AND TERMINATION BOXES SHALL BE PROVIDED. ALL NEW EXPOSED CONDUIT, TAGS, SUPPORTS, FLEXIBLE FINAL CONNECTIONS, NAMEPLATES AND LABELS.
4. THE NEW ODOR CONTROL SYSTEM IS TO BE PROVIDED NEW DUCT BANK TO THE CONTROL BUILDING. AN EQUIPMENT RACK AND ODOR CONTROL PANEL ARE TO BE COORDINATED. THE EXISTING ODOR CONTROL SYSTEM IS TO BE REMOVED AND RELOCATED FOR TEMPORARY SERVICE, PROVIDE ALL TEMPORARY FOR THIS TASK EARLY.
5. FLOW CONTROL STATION IS TO BE COMPLETELY REBUILT WITH NEW MODULATING CONTROL VALVES, METERS AND INSTRUMENTS REQUIRED.
6. THE PROPOSED ELECTRICAL BUILDING IS TO PROVIDE PORTABLE, AND PERMANENT GENERATOR CONNECTION CAPABILITY AS WELL AS HOUSE THE MAIN SERVICE DISCONNECT.
7. THE EXISTING CONTROL BUILDING IS TO BE PROVIDED A REHABILITATION OF ANCILLARY SYSTEMS. MAIN SWITCHGEAR, IS TO BE REMOVED. MOTOR CONTROLS CENTERS AND PLC CONTROL PANELS ARE TO BE REMOVED AND REPLACED. ALL LIGHTING CONTROLS, LIGHT FIXTURES, ALL EXPOSED CONDUIT AND SUMP PUMP CONTROLS ON THE PUMP LEVEL ARE TO BE REMOVED AND REPLACED.
8. GENERAL SITE IMPROVEMENTS INCLUDE BUT ARE NOT LIMITED TO GROUNDING TEST WELLS, CABLE SYSTEM MAINTENANCE THROUGH CONSTRUCTION AND FINAL TESTING. FENCE GROUNDING TO PROPOSED FENCE SYSTEM. SITE LIGHTING INCLUDING BUT NOT LIMITED TO NEW LIGHTING CONTROL PANEL, NEW LED SITE LIGHT FIXTURES, WITH CONVENIENCE OUTLETS. HEAT TRACE POWER CIRCUITS, MISCELLANEOUS SUPPORTS AND HEAT TRACE TESTING. UNDERGROUND PULL BOX FINAL ALIGNMENTS, GRADE ELEVATION AND LABELING WILL BE INSPECTED.

DWG: E–03

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NO.	DATE	REVISIONS	APP.

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TEXAS P.E. NO. 68078
JULY 2025
IT IS NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

KGI Kalluri Group, Inc.
TBPE Registration No. F-665
16300 Katy Freeway, Suite 172
Houston, Texas 77094
Phone: (713)-365-9288

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
JOB NO: _____ DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
CONSTRUCTION NOTES

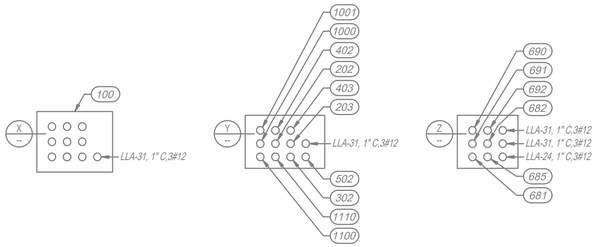
WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-03 Electrical Construction Notes.dwg

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



EXISTING DUCT BANK

SECTIONS

NONE

GENERAL ELECTRICAL NOTES:

A. THIS DRAWING ILLUSTRATES THE EXISTING SITE AND EARLY TASKS FOR TEMPORARY POWER. IT DESCRIBES EQUIPMENT TO BE REMOVED, RELOCATED, AND REPLACED IN THIS PROJECT. SEE DIVISION 16 SPECIFICATIONS FOR ALL WORK AND EQUIPMENT REQUIREMENTS. ALL TEMPORARY CONDUIT AND CONDUCTORS, FOR ALL SYSTEMS IS TO BE INSTALLED IN COMPLIANCE WITH THE NEC ARTICLE 590.

B. PRIOR TO START OF WORK THE CONTRACTOR SHALL DOCUMENT THE OPERATIONAL STATUS OF ALL SITE LIGHTING, EQUIPMENT TO BE PROVIDED TEMPORARY PROVISIONS OR REMOVED FROM SERVICE. THE OPERATIONAL STATUS, OF ALL EQUIPMENT ON SITE IS TO BE CONFIRMED WITH OPERATIONS PRIOR TO START OF WORK. TO ENSURE THERE ARE NO SURPRISES LATER, EQUIPMENT THAT IS NOT FUNCTIONAL AT START OF THE PROJECT IS TO BE DOCUMENTED IN AN "AS FOUND" SHOP DRAWING SUBMITTAL. SEE SPECIFICATION 16060 FOR SUBMITTAL REQUIREMENT. PATH OF POWER, CONTROL AND SCADA CIRCUITS SHALL BE CONFIRMED PRIOR TO INSTALLATION OF TEMPORARY OR REMOVAL FROM AVAILABILITY.

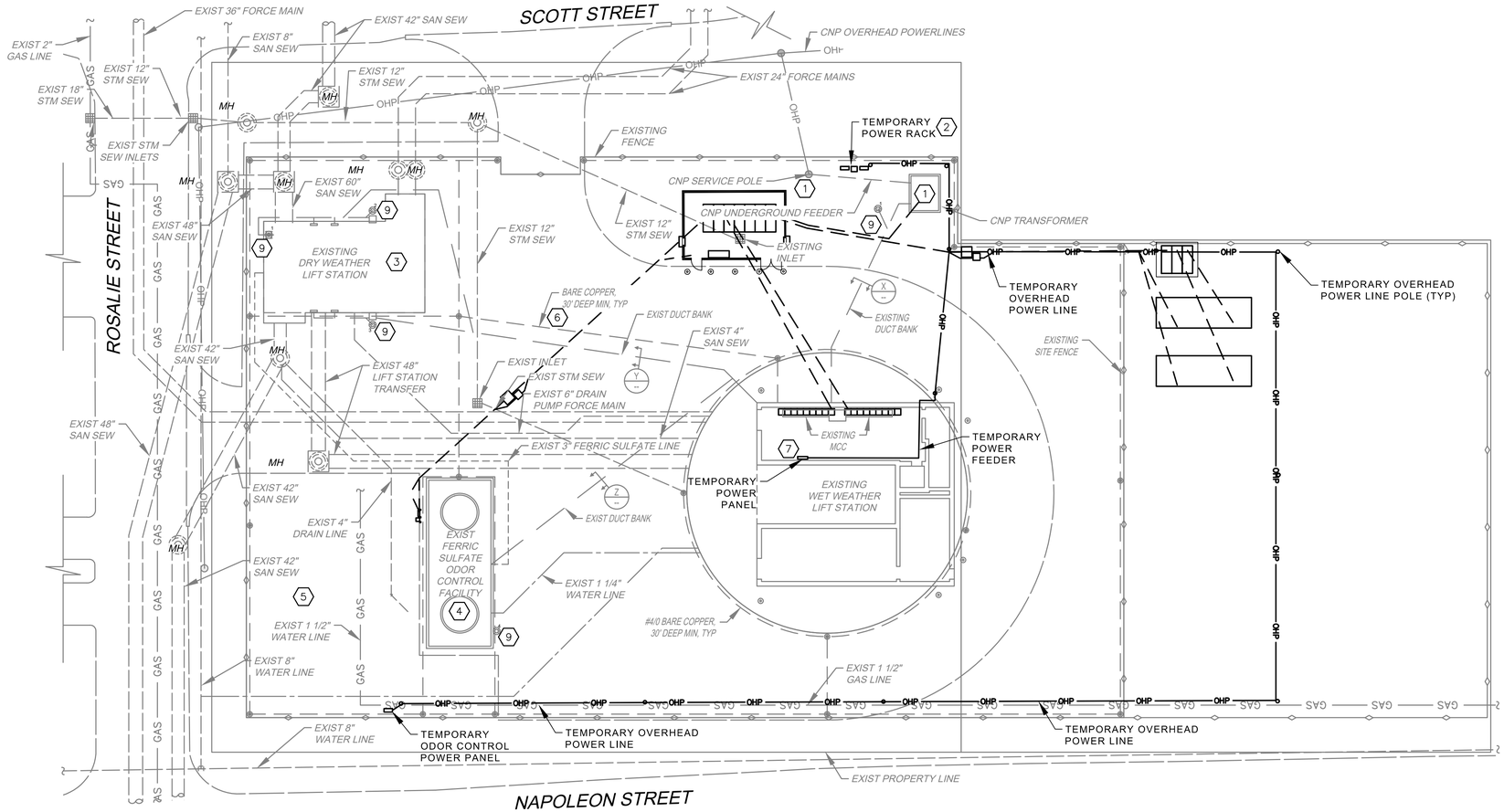
C. CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION REPRESENTATIVE, UPON DISCOVERY, OF ANY CONCEALED DEVIATIONS FROM THE DRAWINGS EXPOSED AFTER "AS FOUND" DOCUMENT SUBMITTAL.

D. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CNP OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CNP STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.

E. TEMPORARY PROVISIONS INCLUDE POWER, CONTROLS, SCADA AND COMMUNICATIONS.

ELECTRICAL TASKS NOTES:

1. THE EXISTING CNP ELECTRIC UTILITY SERVICE SHALL BE KEPT ENERGIZED THROUGHOUT THE PROJECT, DISCONNECT AND RECONNECT SHORT TERM OUTAGES WILL BE REQUIRED TO ACCOMPLISH THE VARIOUS PHASES OF TEMPORARY FACILITIES REQUIRED.
2. A TEMPORARY POWER RACK AND OVERHEAD LINE SYSTEM WILL BE REQUIRED FOR POWER, CONTROL AND SCADA TO FEED CRITICAL SYSTEMS, CONSTRUCTION AND TESTING POWER.
3. THE DRY WEATHER LIFT STATION IS TO BE PROVIDED AN ELECTRICAL UPDATE AND RESTORATION. INSTRUMENTS, FLOATS, AND PUMPS ARE TO BE REMOVED AND REPLACED. ALL LIGHT FIXTURES, OUTLETS, AND CONDUCTORS ARE TO BE REMOVED AND REPLACED.
4. THE EXISTING ODOR CONTROL CHEMICAL FACILITY IS TO BE DISCONNECTED, RELOCATED AND CONNECTED TO TEMPORARY FACILITIES FOR AN EXTENDED PERIOD OF TEMPORARY SERVICE. COORDINATE LOCATION OF TEMPORARY EI&C PROVISIONS PRIOR TO STARTING TEMPORARY INSTALLATION.
5. A TWO BLOWER ODOR CONTROL SYSTEMS WILL BE BUILT IN THIS AREA AND NEW DUCT BANK WILL BE INSTALLED TO THIS AREA. SEE PROPOSED SITE PLAN FOR PROPOSED WORK.
6. SITE GROUNDING WILL SUFFER CUTTING FOR PROPOSED YARD PIPING AND WILL REQUIRE REPAIRS DURING ALL PHASES OF THE CONSTRUCTION PROCESS.
7. THE CONTRACTOR SHALL PROVIDE A TEMPORARY POWER PANEL IN THE LIFT STATION ELECTRICAL ROOM TO SERVE TEMPORARY LIGHTING, TEMPORARY VENTILATION, SUMP PUMPS, CRITICAL EQUIPMENT, CONTROL AND SCADA CIRCUITS. THE PANEL SHALL REMAIN IN SERVICE DURING THE ENTIRE CONSTRUCTION PROCESS. NEW FACILITIES ARE TO BE IN SERVICE CONCURRENTLY WITH TEMPORARY FACILITIES THROUGH TESTING AND COMMISSIONING.
8. THE ODOR CONTROL DUCT BANK IS TO BE CUT UP AND REMOVED, AS REQUIRED, FOR INSTALLATION OF PROPOSED YARD PIPING.
9. EXISTING BUILDING EXTERIOR WALL PACKS AND ALL SITE LIGHTING IS TO REMAIN IN SERVICE.



EXISTING OVERALL SITE

PLAN

1" = 20'-0"



0 5 10 20 40 60

SCALE: 1" = 20'

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
CONSTRUCTION PHASE SITE
PLAN

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:

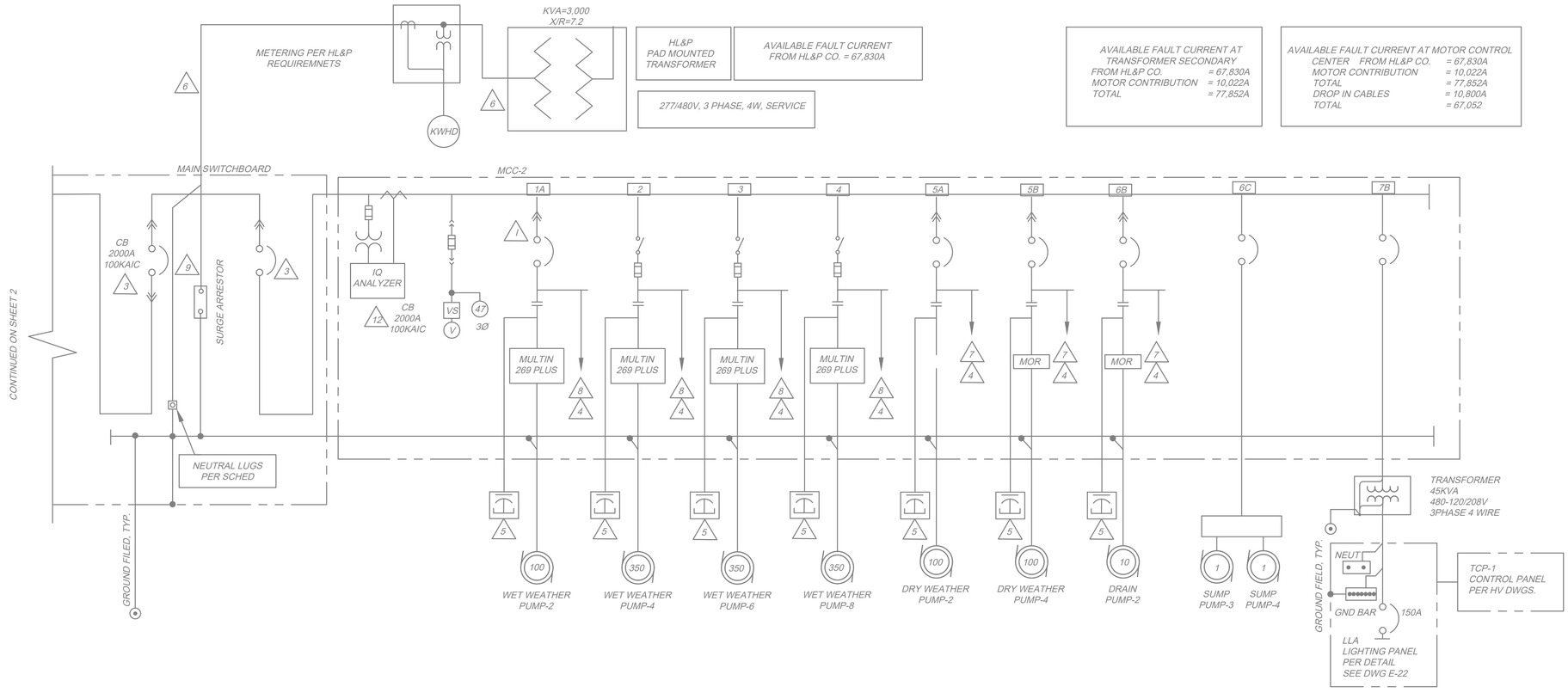
CATEGORY NO. SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

DWG: E-10

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



EXISTING SWITCHGEAR AND MCC-2 ONE LINE

DIAGRAM

NONE

DWG: E–05

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
EXISTING MAIN SWITCHGEAR AND MCC-2 ONE LINE DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

TAG	DESCRIPTION	ROUTING		CONDUIT & WIRE SIZES
		FROM	TO	
A	MAIN BONDING JUMPER	MCC NEUTRAL	MCC GROUND	#4/0 CU
B	EQUIPMENT BONDING JUMPER	MCC GROUND	MCC ENCLOSURE	#4/0 CU
100	SERVICE ENTRANCE	HL&LP SERVICE	MOTOR CONTROL CENTER	3 #750 MCM, #2/0 NEUT & #2/0 GND IN EA OF 9 - 4" RGS
101	LIGHTING DOWN LEAD, TYP	LIGHTNING ARRESTOR	LIGHTNING GROUND FIELD	#2/0 LIGHTING DOWN LEAD
102	TELEPHONE SERVICE	SWB SERVICE (35 KV TERMINAL POLE)	TELEP-ONE TERMINAL CABINET	2" PVC RGS - TELEPHONE
200	DRY WEATHER PUMP NO.1 POWER	DRY WEATHER PUMP NO.1	PUMP NO.1 TERMINAL CABINET	3/C #2/0 8, #6 GND CABLE-3 PVC RGS PER PUMP MFG CABLE SIZE
201	DRY WEATHER PUMP NO.1 CONTROLS	DRY WEATHER PUMP NO.1	PUMP NO.1 TERMINAL CABINET	9/C #14 (8 CONTROL - GND)1 1/2PVC RGS NOTES2
202	DRY WEATHER PUMP NO.1 POWER	DRY WEATHER PUMP NO.1 TERMINAL CABINET	PUMP STARTER	3 #2/0 & #6 GND- 3" RGS
203B	DRY WEATHER PUMP NO.1 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14 (4 CONTROL, 1 GND & 2 SPARE)-1" PVC GRGS
204	DRY WEATHER PUMP NO.1 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELDED PAR #16- 3/4" RGS
205	DRY WEATHER PUMP NO.1 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20#14 (4 SPARE), 2 #12(CT) & #14 GND - 1 1/2" PVC RGS
206	DRY WEATHER PUMP NO.1 CAPACITOR	DRY WEATHER PUMP NO.1 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #4 & #6 GND CABLE- 1" RGS
207	COMBINED CURRENT TRANSMITTERS	MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	3 2/C SIG CABLE - 1"RGS
300	DRY WEATHER PUMP NO.2 POWER	DRY WEATHER PUMP NO.2	PUMP NO.2 TERMINAL CABINET	3/C #2/0 & #6 GND CABLE - 3" PVC RGS NOTE 2
301	DRY WEATHER PUMP NO.2 CONTROLS	DRY WEATHER PUMP NO.2	PUMP NO.2 TERMINAL CABINET	9/C #14 (8 CONTROL + GND)-1 1/2" PVC RGS NOTE2
302	DRY WEATHER PUMP NO.2 POWER	DRY WEATHER PUMP NO.2 TERMINAL CABINET	PUMP STARTER	3 #2/0 & #6 GND - 3" RGS
303	DRY WEATHER PUMP MAIN-CONTROLS	172-LCP-1 CONTROL PANEL	PT-172-01,PT-172-02	2 SH. PR. #16-1" PVC RGS
304	DRY WEATHER PUMP NO.2 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELED PAIR #16 - 3/4" RGS
305	DRY WEATHER PUMP NO.2 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20 #14(4 SPARE #12(CT) & #14 GND - 1 1/2" PVC RGS)
306	DRY WEATHER PUMP NO.2 CAPACITOR	DRY WEATHER PUMP NO.2 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #4 & #6 GND CABLE - 1" RGS
400	DRY WEATHER PUMP NO.3 POWER	DRY WEATHER PUMP NO.3	PUMP NO.3 TERMINAL CABINET	3/C #2/0 & #6 GND CABLE - 3" PVC RGS NOTE 2
401	DRY WEATHER PUMP NO.3 CONTROLS	DRY WEATHER PUMP NO.3	PUMP NO.3 TERMINAL CABINET	9/C #14(8 CONTROL - GND) - 1 1/2" PVC RGS NOTE 2
402	DRY WEATHER PUMP NO.3 POWER	DRY WEATHER PUMP NO.3 TERMINAL CABINET	PUMP STARTER	3 #2/0& #6 GND - 3 " RGS
403A	DRY WEATHER PUMP NO.3 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14 (4 CONTROL, 1 GND & 2 SPARE)- 1" PVC RGS
404	DRY WEATHER PUMP NO.3 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELDED PAIR #16 - 3/4" RGS
405	DRY WEATHER PUMP NO.3 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20 #14 (4 SPARE), 2 #12(CT) & #14 GND - 1 1/2" PVC RGS
406	DRY WEATHER PUMP NO.3 CAPACITOR	DRY WEATHER PUMP NO.3 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #6 & #8 GND CABLE - 1" RGS
500	DRY WEATHER PUMP NO.4 POWER	DRY WEATHER PUMP NO.4	PUMP NO.4 TERMINAL CABINET	3/C #2/0 & #6 GND CABLE - 3" PVC RGS NOTE 2
501	DRY WEATHER PUMP NO.4 CONTROLS	DRY WEATHER PUMP NO.4	PUMP NO.4 TERMINAL CABINET	9/C #14 (8 CONTROL + GND)- 1 1/2" PVC RGS
502	DRY WEATHER PUMP NO.4 POWER	DRY WEATHER PUMP NO.4 TERMINAL CABINET	PUMP STARTER	3 #2/0 & #6 GND - 3" RGS
503	NOT USED			NOT USED
504	DRY WEATHER PUMP NO.4 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELDED PAIR #16 - 3/4" RGS
505	DRY WEATHER PUMP NO.4 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20 #14 (4 SPARE, 2 #12(CT) & #14 GND - 1 1/2" PVC RGS)
506	DRY WEATHER PUMP NO.4 CAPACTOR	DRY WEATHER PUMP NO.4 MOTOR STARTER	POWER FACTOR CORRECTION CAPCITOR	3/C #4 & #6 GND CABLE - 1" RGS
600	LIGHTING PANEL FEEDER	MOTOR CONTROL CENTER	LIGHTING TRANSFORMER	3 #2 & #4 GND - 1 1/4" RGS
601	LIGHTING PANEL GROUND	LIGHTING PANEL	GROUND FIELD	#4 GND - 1" RGS
602	LIGHTING TRANSFORMER	LIGHTING TRANSFORMER	LIGHTING PANEL	3 #1/0, #2 GND - 1 1/2" RGS
605	SUMP PUMPS CONTROL PANEL-1	MOTOR CONTROL CENTER	SUMP PUMPS CONTROL PANEL-1 & PUMPS 1 & 2	20 #14 (4 SPARE, 2 #12(CT) & #14 GND - 1 1/2" PVC RGS)
610	SUMP PUMPS CONTROL PANEL-2	MOTOR CONTROL CENTER	SUMP PUMPS CONTROL PANEL-1 & PUMPS 3 & 4	3/C #4 & #6 GND CABLE - 1" RGS
203A	DRY WEATHER PUMP NO.2 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14(4 CONTROL, 1 GND,& 2 SPARE)- 1 PVC/RGS
403B	DRY WEATHER PUMP NO.4 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14(4 CONTROL, 1 GND,& 2 SPARE)- 1 PVC/RGS
615	DRAIN PUMP-1 POWER	MOTOR CONTROL CENTER	DRAIN PUMP-1	3 #12 & #12 GND - 1" RGS
616	DRAIN PUMP-1 CONTROL	MOTOR CONTROL CENTER	DRAIN PUMP-1 & -S-172-13	6 #14 & #14 GND - 1" RGS
617	DRAIN PUMP-1 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	15 #14 (4 SPARE),& #14 GND - 14/2" PVC RGS
618	DRAIN PUMP-1 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	1 SHIELDED PAIR #16 - 3/4" RGS
620	DRAIN PUMP-2 POWER	MOTOR CONTROL CENTER	DRAIN PUMP-2	3 #12 & #12 GND - 1" RGS
621	DRAIN PUMP-2 CONTROL	MOTOR CONTROL CENTER	DRAIN PUMP-2 & HS-172-14	6 #14 & #14 GND - 1" RGS
622	DRAIN PUMP-2 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	15 #14 (4 SPARE),& #14 GND - 14/2" PVC RGS
623	DRAIN PUMP-2 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	1 SHIELDED PAIR #16 - 3/4" RGS
625	AIR COMPRESSORS CONTROL PANEL	MOTOR CONTROL CENTER	AIR COMPRESSORS CONTROL PANEL	3 #10 & #10 GND - 1" RGS
630	ELEVATOR	MOTOR CONTROL CENTER	ELEVATOR	3 #6 & #8 GND - 1 1/2" RGS
631				
635	TOP-1 CONTROL	MOTOR CONTROL CENTER	TOP-1	20#14 & #14 GND - 1" RGS
636				
640	HV-1 POWER	MOTOR CONTROL CENTER	HV-1	3 #12 & #12 GND - 1" RGS
641	HV-1 CONTROL	TCP	HV-1	8 #14 & #14 GND - 1" RGS
642	HV-2 POWER	MOTOR CONTROL CENTER	HV-2	3 #12 & #12 GND - 1" RGS
643	HV-2 CONTROL	TCP	HV-2	8 #14 & #14 GND - 1" RGS
644	HV-3 POWER	MOTOR CONTROL CENTER	HV-3	3 #12 & #12 GND - 1" RGS
645	HV-3 CONTROL	TCP	HV-3	8 #14 & #14 GND - 1" RGS
650	EF-1	MOTOR CONTROL CENTER	EF-1	3 #12 & #12 GND - 1" RGS
651	EF-2	MOTOR CONTROL CENTER	EF-2	3 #12 & #12 GND - 1" RGS
652	EF-3	MOTOR CONTROL CENTER	EF-3	3 #12 & #12 GND - 1" RGS
653	EF-4	MOTOR CONTROL CENTER	EF-4	3 #12 & #12 GND - 1" RGS
663				
664				
670	AIR CONDITIONING UNIT - POWER	MOTOR CONTROL CENTER	ACU-1	3 #8 & #8 GND - 1" RGS
671	AIR CONDITIONING UNIT - CONTROL	TCP-1	ACU-1	4 #14 & #14 GND - 1" RGS
680				
681	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL(DWCP)	CHEMICAL FEED PUMP PANEL	2 SHIELDED PAIRS #16-1" PVC RGS(PACING SIGNAL)
682	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL(DWCP)	LIT-172-01,02,03	4 #14 & #14 GND - 1" RGS(HIGH LEVEL ALARM)
685	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL(DWCP)	LIT-172-01,02,03	4 #14 & #14 GND - 1" RGS(LEVEL STATUS)

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
CONDUIT & CONDUCTOR SCHEDULE
SHEET 1

WBS #: R-000267-127A-3

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DWG: E-06

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

TAG	DESCRIPTION	ROUTING		CONDUIT & WIRE SIZES
		FROM	TO	
686	CHEMICAL FEED SYSTEM - CONTROL	LIT-172-01	LIT-172-01	1 SHIELD PAIRS #16-1" PVC RGS
687	CHEMICAL FEED SYSTEM - CONTROL	LIT-172-02	LIT-172-02	1 SHIELD PAIRS #16-1" PVC RGS
688	CHEMICAL FEED SYSTEM - CONTROL	LIT-172-03	LIT-172-03	1 SHIELD PAIRS #16-1" PVC RGS
690	CHEMICAL FEED SYSTEM - POWER	172-LCP-1 CONTROL PANEL (DWCP)	CHEMICAL FEED PUMP PANEL 3X	#12 & #12 GND (2H+1N+1G)(PUMP 1 & 2 POWER)
691	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL (DWCP)	LIT-172-01,02,03	(SPARE)
692	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL (DWCP)	CHEMICAL FEED PUMP PANEL	(SPARE)
900	INTRUSION ALARM	DOOR LIMIT SWITCH	172-LCP-2 CONTROL PANEL	2 #14 & #14 GND - 1"RGS
901	VOLTAGE MONITOR RELAY	MOTOR CONTROL CENTER-2	172-LCP-1 CONTROL PANEL	4 #14 & #14 GND - 1"RGS
902	FORCE MAIN HIGH PRESSURE	PSH-172-01	172-LCP-2 CONTROL PANEL	2-16/2TS CABLES 1" RGS RFI-BE-07
903	VOLTAGE MONITOR RELAY	MOTOR CONTROL CENTER-1	172-LCP-2 CONTROL PANEL	4 #14 & #14 GND - 1"RGS
1000	AIR CELL TUBING	172-LCP-1 CONTROL PANEL	AIR CELL NO.1	2" PVC RGS AIR TUBING
1001	AIR CELL TUBING	172-LCP-1 CONTROL PANEL	AIR CELL NO.2	2" PVC RGS AIR TUBING
1002	AIR CELL TUBING	172-LCP-2 CONTROL PANEL	AIR CELL NO.1	2" PVC RGS AIR TUBING
1003	AIR CELL TUBING	172-LCP-2 CONTROL PANEL	AIR CELL NO.2	2" PVC RGS AIR TUBING
1100	FUTURE SPACE - TO FIELD	MOTOR CONTROL CENTER	PUMP NO.1 TERMINAL CABINET	1" PVC RGS (SPARE)
1101	NOT USED			NOT USED
1110	NOT USED			NOT USED
1200	FUTURE SPACE - TO FIELD	MOTOR CONTROL CENTER	PUMP NO.2 TERMINAL CABINET	(SPARE)
1201	NOT USED			NOT USED
2100	WET WEATHER PUMP NO.1 POWER	WET WEATHER PUMP NO.1	PUMP STARTER IN MCC	3 #2/0 & #6 GND - 3" RGS
2101	WET WEATHER PUMP NO.1 CONTROLS	WET WEATHER PUMP NO.1 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2102	WET WEATHER PUMP NO.1 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2103	WET WEATHER PUMP NO.1 CONTROLS	WET WEATHER PUMP NO.1	PUMP STARTER & MULTILIN RELAY IN MCC	7/C #18 SHIELDED TRIADS -3" RGS
2104	WET WEATHER PUMP NO.1 CAPACITOR	WET WEATHER PUMP NO.1 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2105	WET WEATHER DSCH VLV. NO.1-CONTROLS	172-LCP-2	172-CV-05	6#14 & #14 GND-1" RGS
2200	WET WEATHER PUMP NO.2 POWER	WET WEATHER PUMP NO.2	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2201	WET WEATHER PUMP NO.2 CONTROLS	WET WEATHER PUMP NO.2 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2202	WET WEATHER PUMP NO.2 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2203	WET WEATHER PUMP NO.2 CONTROLS	WET WEATHER PUMP NO.2	PUMP STARTER & MULTILIN RELAY IN MCC	7/C #18 SHIELDED TRIADS -3" RGS
2204	WET WEATHER PUMP NO.2 CAPACITOR	WET WEATHER PUMP NO.2 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2205	WET WEATHER DSCH VLV. NO.2-CONTROLS	172-LCP-2	172-CV-06	6#14 & #14 GND-1" RGS
2300	WET WEATHER PUMP NO.3 POWER	WET WEATHER PUMP NO.3	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2301	WET WEATHER PUMP NO.3 CONTROLS	WET WEATHER PUMP NO.3 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2302	WET WEATHER PUMP NO.3 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2303	WET WEATHER PUMP NO.3 CONTROLS	WET WEATHER PUMP NO.3	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2304	WET WEATHER PUMP NO.3 CAPACITOR	WET WEATHER PUMP NO.3 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2305	WET WEATHER DSCH VLV. NO.3-CONTROLS	172-LCP-2	172-CV-07	6#14 & #14 GND-1" RGS
2400	WET WEATHER PUMP NO.4 POWER	WET WEATHER PUMP NO.4	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2401	WET WEATHER PUMP NO.4 CONTROLS	WET WEATHER PUMP NO.4 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2402	WET WEATHER PUMP NO.4 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2403	WET WEATHER PUMP NO.4 CONTROLS	WET WEATHER PUMP NO.4	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2404	WET WEATHER PUMP NO.4 CAPACITOR	WET WEATHER PUMP NO.4 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2405	WET WEATHER DSCH VLV. NO.4-CONTROLS	172-LCP-2	172-CV-08	6#14 & #14 GND-1" RGS
2500	WET WEATHER PUMP NO.5 POWER	WET WEATHER PUMP NO.5	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2501	WET WEATHER PUMP NO.5 CONTROLS	WET WEATHER PUMP NO.5 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2502	WET WEATHER PUMP NO.5 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2503	WET WEATHER PUMP NO.5 CONTROLS	WET WEATHER PUMP NO.5	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2504	WET WEATHER PUMP NO.5 CAPACITOR	WET WEATHER PUMP NO.5 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2505	WET WEATHER DSCH VLV. NO.5-CONTROLS	172-LCP-2	172-CV-09	6#14 & #14 GND-1" RGS
2600	WET WEATHER PUMP NO.6 POWER	WET WEATHER PUMP NO.6	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2601	WET WEATHER PUMP NO.6 CONTROLS	WET WEATHER PUMP NO.6 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2602	WET WEATHER PUMP NO.6 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2603	WET WEATHER PUMP NO.6 CONTROLS	WET WEATHER PUMP NO.6	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2604	WET WEATHER PUMP NO.6 CAPACITOR	WET WEATHER PUMP NO.6 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2605	WET WEATHER DSCH VLV. NO.6-CONTROLS	172-LCP-2	172-CV-10	6#14 & #14 GND-1" RGS
2700	WET WEATHER PUMP NO.7 POWER	WET WEATHER PUMP NO.7	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2701	WET WEATHER PUMP NO.7 CONTROLS	WET WEATHER PUMP NO.7 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2702	WET WEATHER PUMP NO.7 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2703	WET WEATHER PUMP NO.7 CONTROLS	WET WEATHER PUMP NO.7	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2704	WET WEATHER PUMP NO.7 CAPACITOR	WET WEATHER PUMP NO.7 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2705	WET WEATHER DSCH VLV. NO.7-CONTROLS	172-LCP-2	172-CV-11	6#14 & #14 GND-1" RGS
2800	WET WEATHER PUMP NO.8 POWER	WET WEATHER PUMP NO.8	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2801	WET WEATHER PUMP NO.8 CONTROLS	WET WEATHER PUMP NO.8 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14 ,#14 GND - 1 1/2" RGS
2802	WET WEATHER PUMP NO.8 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2803	WET WEATHER PUMP NO.8 CONTROLS	WET WEATHER PUMP NO.8	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2804	WET WEATHER PUMP NO.8 CAPACITOR	WET WEATHER PUMP NO.8 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2805	WET WEATHER DSCH VLV. NO.8-CONTROLS	172-LCP-2	172-CV-12	6#14 & #14 GND-1" RGS

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NO.	DATE	REVISIONS	APP.

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16300 Katy Freeway, Suite 172
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Phone: (713)-365-9288

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6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
JOB NO: _____ DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
CONDUIT & CONDUCTOR SCHEDULE
SHEET 2

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:

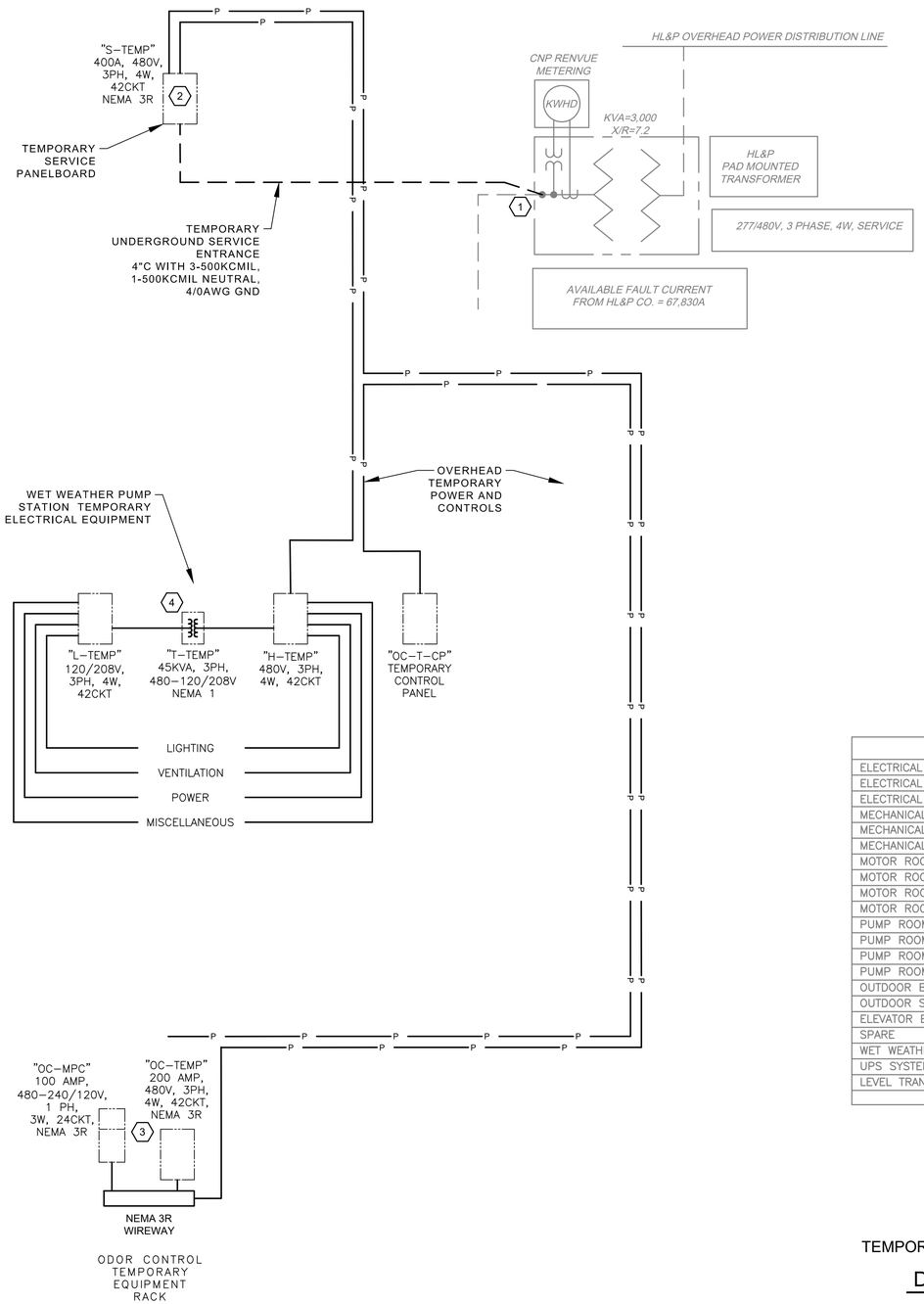
CATEGORY NO. SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

DWG: E–07

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



GENERAL ELECTRICAL NOTES:

A. THIS DRAWING ILLUSTRATES THE EXISTING CENTERPOINT ELECTRIC SERVICE IN LIGHT LINE WORK. A SIMPLIFIED TEMPORARY POWER DISTRIBUTION SYSTEM IS ILLUSTRATED IN BOLD AND NOTES FOR BASIC TEMPORARY POWER TO BE PROVIDED. TECHNICAL DATA FOR TEMPORARY EQUIPMENT APPLICATION AND TEMPORARY SERVICE CONDUIT AND CONDUCTORS ARE ALSO SHOWN. ALL TEMPORARY FACILITIES SHALL BE PROVIDED AND INSTALLED IN COMPLIANCE WITH CENTERPOINT SERVICE STANDARDS AND NEC ARTICLE 590.

B. CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION REPRESENTATIVE, UPON DISCOVERY, OF ANY DEVIATIONS FROM THE CONTRACT DRAWINGS, EXPOSED IN "AS FOUND" RESEARCH.

C. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CNP OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CNP STANDARDS FOR SAFE WORKING DISTANCE, INCLUDING TEMPORARY OVERHEAD SIGNAGE AND PROCEDURES.

D. TEMPORARY PROVISIONS INCLUDE POWER (480V & 120V), CONTROLS (TEMPORARY STARTERS/CONTACTORS), SCADA (PLC I/O) AND COMMUNICATIONS (CAT5 OR FIBER) FOR FACILITY OPERATION. "CONSTRUCTION" TEMPORARY IS ALSO REQUIRED FOR OSHA WORKPLACE SAFETY, CITY OPERATIONS PERSONNEL AND SIMPLE HAND TOOL CONSTRUCTION POWER. EXTENSION CORDS SHALL NOT, BE ROUTED DOWN STAIRWELLS DURING CONSTRUCTION, EXISTING CIRCUITS MAY BE PROVIDED TEMPORARY CONNECTION. EXISTING LIGHTING IS NOT ADEQUATE FOR CONSTRUCTION, ALL LIGHT FIXTURES ARE TO BE REPLACED AND FIXTURES ADDED. STRINGS OF TEMPORARY LIGHTING ARE REQUIRED.

E. CONTINUOUSLY OPERATIONAL TEMPORARY VENTILATION, INTERIOR LIGHTING ON ALL LEVELS AND STAIRWAYS, EXTERIOR SITE LIGHTING, STATION SUMP PUMPING SYSTEMS, AND ODOR CONTROL SYSTEM SUPPORT SHALL BE PROVIDED IN THE BASE BID. NO ADDITIONAL FUNDS SHALL BE ALLOWED FOR TEMPORARY FACILITIES.

ELECTRICAL TASKS NOTES:

1. THE EXISTING CNP ELECTRIC UTILITY SERVICE SHALL BE KEPT ENERGIZED THROUGHOUT THE PROJECT. DISCONNECT AND RECONNECT SHORT TERM OUTAGES WILL BE REQUIRED TO ACCOMPLISH THE VARIOUS PHASES OF TEMPORARY FACILITIES REQUIRED.
2. A TEMPORARY POWER RACKS AND OVERHEAD LINE SYSTEM WILL BE REQUIRED FOR POWER, CONTROL AND SCADA TO FEED CRITICAL SYSTEMS, CONSTRUCTION AND TESTING POWER.
3. THE EXISTING ODOR CONTROL CHEMICAL FACILITY IS TO BE DISCONNECTED, RELOCATED AND CONNECTED TO TEMPORARY FACILITIES FOR AN EXTENDED PERIOD OF TEMPORARY SERVICE. COORDINATE LOCATION OF TEMPORARY EI&C PROVISIONS PRIOR TO STARTING TEMPORARY INSTALLATION.
4. THE CONTRACTOR SHALL PROVIDE A TEMPORARY POWER PANEL IN THE LIFT STATION ELECTRICAL ROOM TO SERVE TEMPORARY LIGHTING, TEMPORARY VENTILATION, SUMP PUMPS, CRITICAL EQUIPMENT, CONTROL AND SCADA CIRCUITS. THE PANEL SHALL REMAIN IN SERVICE DURING THE ENTIRE CONSTRUCTION PROCESS. NEW FACILITIES ARE TO BE IN SERVICE CONCURRENTLY WITH TEMPORARY FACILITIES THROUGH TESTING AND COMMISSIONING.

EXISTING PANEL "LLA"

CKT. DESCRIPTION	LOAD	BKR.	A	B	C	BKR.	LOAD	CKT. DESCRIPTION
ELECTRICAL ROOM LIGHTING	800	20	1		2	20	600	STAIRWELL LIGHTING
ELECTRICAL ROOM LIGHTING	800	20	3		4	20	500	DRAIN PUMP & STORAGE LIGHTING
ELECTRICAL ROOM RECEPTACLES	1200	20	5		6	20	400	DRAIN PUMP & STORAGE RECEPTACLES
MECHANICAL ROOM LIGHTING	800	20	7		8	20	800	MOTOR CONTROL CENTER SPACE HEATERS
MECHANICAL ROOM EXIT/EMERGENCY LIGHTS	600	20	9		10	20	–	ELECTRICAL ROOM AIR COMPRESSOR
MECHANICAL ROOM RECEPTACLES	1200	20	11		12	20	800	BATHROOM BASEBOARD HEATER
MOTOR ROOM WEST LIGHTING	1400	20	13		14	20	1500	HOT WATER HEATER
MOTOR ROOM WEST RECEPTACLES	400	20	15		16	20	500	IRRIGATION CONTROLLER
MOTOR ROOM EAST LIGHTING	1400	20	17		18	30	500	TEMPURATURE CONTROL PANEL TCP–1
MOTOR ROOM EAST RECEPTACLES	400	20	19		20	30	1500	DRINKING WATER FOUNDATION
PUMP ROOM WEST LIGHTING	1100	20	21		22	20	1000	AIR HAND DRYER
PUMP ROOM WEST RECEPTACLES	400	20	23		24	20	600	CHEMICAL FEED SYSTEM
PUMP ROOM EAST LIGHTING	1100	20	25		26	20	600	EXHAUST FANS 5&6
PUMP ROOM EAST RECEPTACLES	400	20	27		28	20	400	EXHAUST FANS 7&8
OUTDOOR BUILDING LIGHTING	800	20	29		30	20	–	LIGHTING CONTACTOR/PHOTOCELL CONTROLS
OUTDOOR SITE LIGHTING	1000	20	31		32	20	–	ELEVATOR CAB LIGHTING
ELEVATOR EQUIPMENT ROOM A/C UNIT	400	20	33		34	20	–	ELEVATOR PIT LIGHTING
SPARE	600	20	35		36	20	900	SPARE
WET WEATHER CONTROL PANEL	900	20	37		38	20	–	SPARE
UPS SYSTEM	1800	20	39		40	20	–	SPARE
LEVEL TRANSMITTERS	–	20	41		42	20	–	SPARE

TEMPORARY SITE POWER

DIAGRAM

NONE

DWG: E–08

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NO.	DATE	REVISIONS	APP.

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TEXAS P.E. NO. 68078
JULY 2025
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KGI Kalluri Group, Inc.
TBPE Registration No. F–665
16300 Katy Freeway, Suite 172
Houston, Texas 77094
Phone: (713)–365–9285

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
JOB NO: _____ DWG BY: RHW

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
TEMPORARY SITE POWER
DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-08 Electrical Temporary Site Power Diagram.dwg

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

PANEL "H-TEMP"

BUS AMPS 400 — NOTES

MAIN BRKR. AMPS 400 WIRE SIZE 500 KCMIL

VOLTS 480/277 AIC 65 KA

PHASE 3 WIRE 4 SN ✓

400A

CKT. DESCRIPTION	WIRE	LOAD	BKR.	A	B	C		BKR.	LOAD	WIRE	CKT. DESCRIPTION
	12	500		1			2		1000	12	
	12	500	20	3			4	20	1000	12	
	12	500		5			6		1000	12	
	12	1500		7			8		2103	12	
	12	1500	20	9			10	20	2103	12	
	12	1500		11			12		2103	12	
	12	2000		13			14		2103	12	
	12	2000	20	15			16	20	2103	12	
	12	2000		17			18		2103	12	
	12	1333		19			20		2103	12	
	12	1333	20	21			22	20	2103	12	
	12	1333		23			24		2103	12	
	12	1333		25			26		1666	12	
	12	1333	20	27			28	20	1666	12	
	12	1333		29			30		1666	12	
	12	3300		31			32				
	12	3300	20	33			34	20			SPARE
	12	3300		35			36				
	12	2700		37			38	20	726	12	LIGHTING
	12	2700	20	39			40	20	1892	12	LIGHTING
	12	2700		41			42	20	1614	12	LIGHTING
				43			44	20			SPARE
SPARE			20	45			46	20			↓
				47			48	20			
				49			50		45000	6	
SPARE			20	51			52	60	45000	6	XFMR "T-3LA" (45kVA)
				53			54		45000	6	

TOTAL = X VA

PROPOSED

PANEL "L-TEMP"

BUS AMPS 150 — NOTES

MAIN BRKR. AMPS MLO WIRE SIZE 1/0 AWG

VOLTS 208/120 AIC 10 KA

PHASE 3 WIRE 4 SN ✓

125

CKT. DESCRIPTION	WIRE	LOAD	BKR.	A	B	C		BKR.	LOAD	WIRE	CKT. DESCRIPTION
	12	1000	20	1			2	20	1000	12	IT RECEPTALCE
	12	1000	20	3			4	20	1000	12	
	12	1000	20	5			6	20	1000	12	
	12	–	20	7			8	20		12	
	12	1267	20	9			10	20			SPARE
	12	120	20	11			12	20			
	12	528	20	13			14	20			
	12	864	20	15			16	20			
	12	1000	20	17			18	20			
	12	1000	20	19			20	20			
	12	1000	20	21			22	20			
	12	1000	20	23			24	20			
WORK STATION	12	1000	20	25			26	20			
HALLWAY RECEPTACLE (3)	12	1000	20	27			28	20			
SPARE			20	29			30	20			↓
			20	31			32				
			20	33			34	80			SPARE
			20	35			36				
			20	37			38				
			20	39			40	80			PANEL 3LA-N FEEDER
			20	41			42				

TOTAL = X VA

PROPOSED

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
TEMPORARY PANELBOARD
SCHEDULES

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

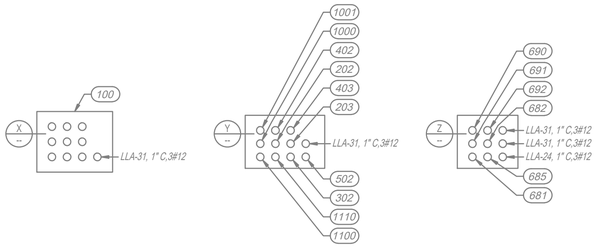
DRAWING SCALE: AS SHOWN HORIZ: VERT:

CATEGORY NO. SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

DWG: E-09

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



EXISTING DUCT BANK

SECTIONS

NONE

GENERAL ELECTRICAL NOTES:

A. THIS DRAWING ILLUSTRATES THE EXISTING SITE AND EARLY TASKS FOR TEMPORARY POWER. IT DESCRIBES EQUIPMENT TO BE REMOVED, RELOCATED, AND REPLACED IN THIS PROJECT. SEE DIVISION 16 SPECIFICATIONS FOR ALL WORK AND EQUIPMENT REQUIREMENTS. ALL TEMPORARY CONDUIT AND CONDUCTORS, FOR ALL SYSTEMS IS TO BE INSTALLED IN COMPLIANCE WITH THE NEC ARTICLE 590.

B. PRIOR TO START OF WORK THE CONTRACTOR SHALL DOCUMENT THE OPERATIONAL STATUS OF ALL SITE LIGHTING, EQUIPMENT TO BE PROVIDED TEMPORARY PROVISIONS OR REMOVED FROM SERVICE. THE OPERATIONAL STATUS, OF ALL EQUIPMENT ON SITE IS TO BE CONFIRMED WITH OPERATIONS PRIOR TO START OF WORK. TO ENSURE THERE ARE NO SURPRISES LATER, EQUIPMENT THAT IS NOT FUNCTIONAL AT START OF THE PROJECT IS TO BE DOCUMENTED IN AN "AS FOUND" SHOP DRAWING SUBMITTAL. SEE SPECIFICATION 16060 FOR SUBMITTAL REQUIREMENT. PATH OF POWER, CONTROL AND SCADA CIRCUITS SHALL BE CONFIRMED PRIOR TO INSTALLATION OF TEMPORARY OR REMOVAL FROM AVAILABILITY.

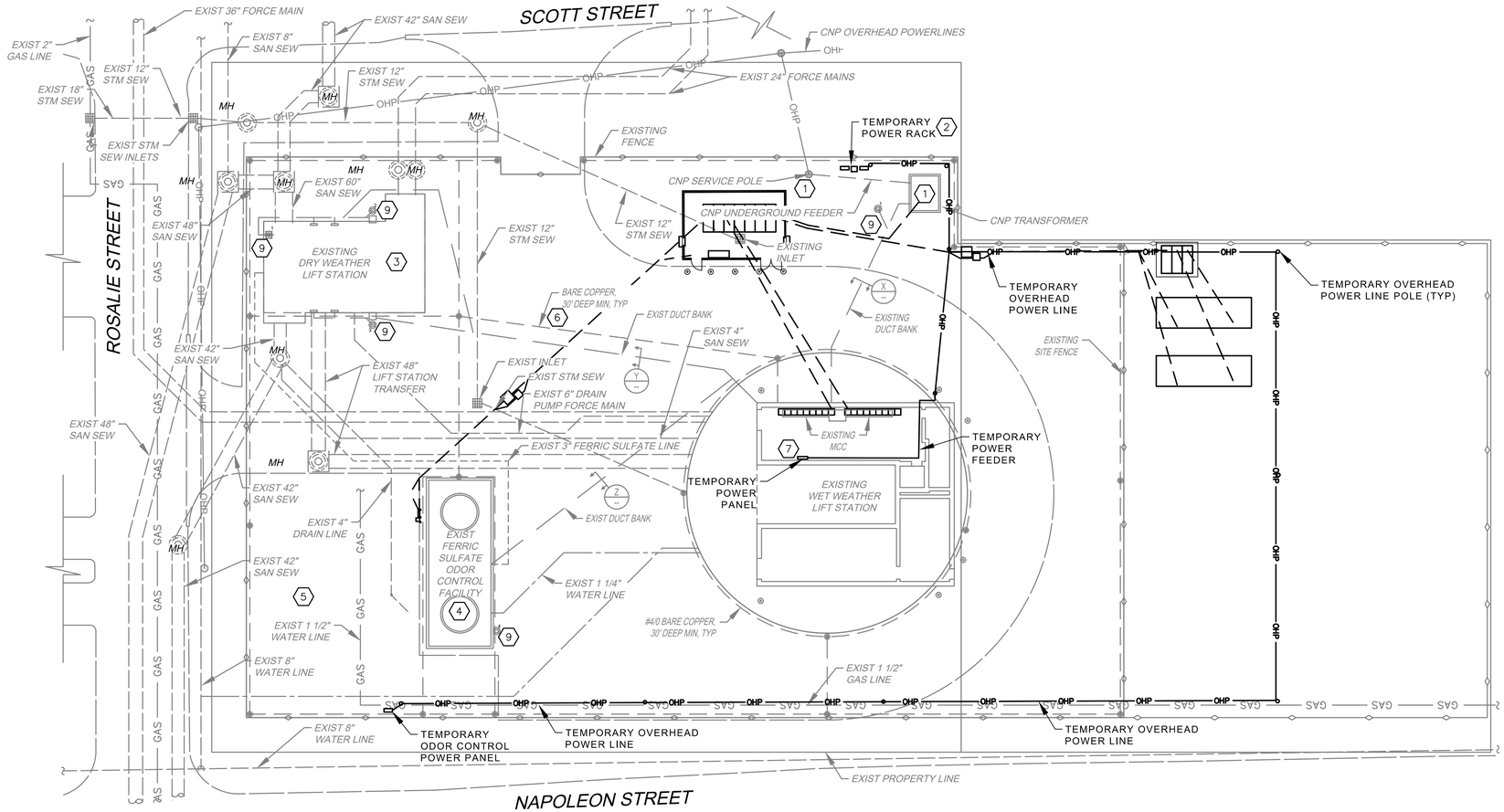
C. CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION REPRESENTATIVE, UPON DISCOVERY, OF ANY CONCEALED DEVIATIONS FROM THE DRAWINGS EXPOSED AFTER "AS FOUND" DOCUMENT SUBMITTAL.

D. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CNP OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CNP STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.

E. TEMPORARY PROVISIONS INCLUDE POWER, CONTROLS, SCADA AND COMMUNICATIONS.

ELECTRICAL TASKS NOTES:

1. THE EXISTING CNP ELECTRIC UTILITY SERVICE SHALL BE KEPT ENERGIZED THROUGHOUT THE PROJECT, DISCONNECT AND RECONNECT SHORT TERM OUTAGES WILL BE REQUIRED TO ACCOMPLISH THE VARIOUS PHASES OF TEMPORARY FACILITIES REQUIRED.
2. A TEMPORARY POWER RACK AND OVERHEAD LINE SYSTEM WILL BE REQUIRED FOR POWER, CONTROL AND SCADA TO FEED CRITICAL SYSTEMS, CONSTRUCTION AND TESTING POWER.
3. THE DRY WEATHER LIFT STATION IS TO BE PROVIDED AN ELECTRICAL UPDATE AND RESTORATION. INSTRUMENTS, FLOATS, AND PUMPS ARE TO BE REMOVED AND REPLACED. ALL LIGHT FIXTURES, OUTLETS, AND CONDUCTORS ARE TO BE REMOVED AND REPLACED.
4. THE EXISTING ODOR CONTROL CHEMICAL FACILITY IS TO BE DISCONNECTED, RELOCATED AND CONNECTED TO TEMPORARY FACILITIES FOR AN EXTENDED PERIOD OF TEMPORARY SERVICE. COORDINATE LOCATION OF TEMPORARY EI&C PROVISIONS PRIOR TO STARTING TEMPORARY INSTALLATION.
5. A TWO BLOWER ODOR CONTROL SYSTEMS WILL BE BUILT IN THIS AREA AND NEW DUCT BANK WILL BE INSTALLED TO THIS AREA. SEE PROPOSED SITE PLAN FOR PROPOSED WORK.
6. SITE GROUNDING WILL SUFFER CUTTING FOR PROPOSED YARD PIPING AND WILL REQUIRE REPAIRS DURING ALL PHASES OF THE CONSTRUCTION PROCESS.
7. THE CONTRACTOR SHALL PROVIDE A TEMPORARY POWER PANEL IN THE LIFT STATION ELECTRICAL ROOM TO SERVE TEMPORARY LIGHTING, TEMPORARY VENTILATION, SUMP PUMPS, CRITICAL EQUIPMENT, CONTROL AND SCADA CIRCUITS. THE PANEL SHALL REMAIN IN SERVICE DURING THE ENTIRE CONSTRUCTION PROCESS. NEW FACILITIES ARE TO BE IN SERVICE CONCURRENTLY WITH TEMPORARY FACILITIES THROUGH TESTING AND COMMISSIONING.
8. THE ODOR CONTROL DUCT BANK IS TO BE CUT UP AND REMOVED, AS REQUIRED, FOR INSTALLATION OF PROPOSED YARD PIPING.
9. EXISTING BUILDING EXTERIOR WALL PACKS AND ALL SITE LIGHTING IS TO REMAIN IN SERVICE.



EXISTING OVERALL SITE

PLAN

1" = 20'-0"



0 5 10 20 40 60

SCALE: 1" = 20'

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.

Signature Valid for six months.

Date:

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Date:

Approved for AT&T Texas / SWBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.

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TEXAS P.E. NO. 68078
JULY 2025
IT IS NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

KGI Kalluri Group, Inc.
TBPE Registration No. F-665
16300 Katy Freeway, Suite 172
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QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
JOB NO: _____ DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
CONSTRUCTION PHASE SITE
PLAN

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:

CATEGORY NO. SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

DWG: E-10

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-04 & E-10 Electrical Site Plans.dwg

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

GENERAL ELECTRICAL NOTES:

A. THIS DRAWING ILLUSTRATES THE PROPOSED FINAL SITE AND DESCRIBES THE MAIN ELECTRICAL TASKS FOR THE PROJECT.

B. PRIOR TO START OF WORK THE CONTRACTOR SHALL DOCUMENT THE OPERATIONAL STATUS OF ALL SITE LIGHTING, EQUIPMENT TO BE PROVIDED TEMPORARY PROVISIONS OR REMOVED FROM SERVICE. THE OPERATIONAL STATUS, OF ALL EQUIPMENT ON SITE IS TO BE CONFIRMED WITH OPERATIONS PRIOR TO START OF WORK. TO ENSURE THERE ARE NO SURPRISES LATER, EQUIPMENT THAT IS NOT FUNCTIONAL AT START OF THE PROJECT IS TO BE DOCUMENTED IN AN "AS FOUND" SHOP DRAWING SUBMITTAL. SEE SPECIFICATION 16060 FOR SUBMITTAL REQUIREMENT. PATH OF POWER, CONTROL AND SCADA CIRCUITS SHALL BE CONFIRMED PRIOR TO INSTALLATION OF TEMPORARY OR REMOVAL FROM AVAILABILITY.

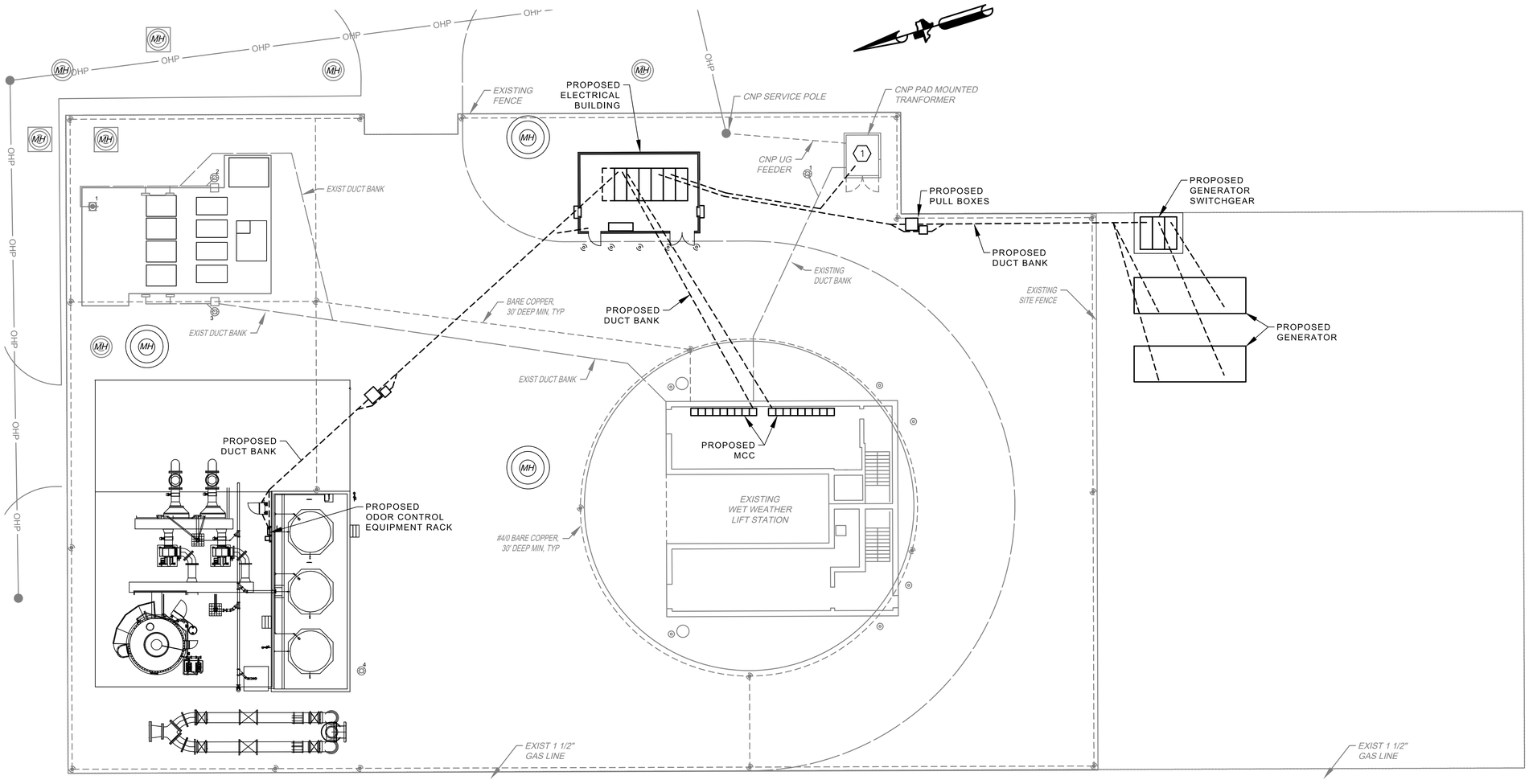
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E. TEMPORARY PROVISIONS INCLUDE POWER, CONTROLS, SCADA AND COMMUNICATIONS.

PROJECT ELECTRICAL TASKS NOTES:

1. THE EXISTING CNP ELECTRIC UTILITY SERVICE SHALL BE KEPT ENERGIZED THROUGHOUT THE PROJECT, DISCONNECT AND RECONNECT SHORT TERM OUTAGES WILL BE REQUIRED TO ACCOMPLISH THE VARIOUS PHASES OF TEMPORARY FACILITIES REQUIRED.
2. THE TEMPORARY POWER PROVISIONS SHALL BE REMOVED AFTER NEW SYSTEMS ARE IN SERVICE.
3. THE TWO LIFT STATIONS RESTORATION SHALL BE PROVIDED A COMPLETE TESTING, COMMISSIONING AND DOCUMENTATION PACKAGE.
4. THE PROPOSED ODOR CONTROL FACILITIES POWER AND EQUIPMENT RACK SHALL BE PROVIDED A CANOPY FOR SHADE AND RAIN PROTECTION.
5. SITE GROUNDING SHALL BE PROVIDED AFTER THE CONSTRUCTION PROCESS IS COMPLETE.



BENCH MARK

A BRASS DISC STAMPED "RM 070215" LOCATED AT THE END OF YAUPON HOLLY LANE AT ITS INTERSECTION WITH EASTERN REDBUD LANE, ON TOP OF A "B-B" INLET AT THE NORTHWEST CORNER OF THE INTERSECTION.
ELEVATION = 64.76 FEET NAVD 88 (2001 ADJUSTMENT)

T.B.M. "A"

A CHISELED SQUARE ON THE BULL NOSE OF THE ESPLANADE LOCATED ON WEST LAKE HOUSTON PARKWAY APPROXIMATELY 970 FEET NORTH OF THE CENTERLINE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.
ELEVATION = 55.34 FEET NAVD 88 (2001 ADJUSTMENT)

T.B.M. "B"

A CHISELED SQUARE ON TOP OF A "B-B" INLET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.
ELEVATION = 53.67 FEET NAVD 88 (2001 ADJUSTMENT)

100-YEAR FLOOD PLAIN

ACCORDING TO MAP No. 48201C0510L OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR HARRIS COUNTY, TEXAS AND INCORPORATED AREAS, DATED JUNE 18, 2007, THE SUBJECT TRACT IS SITUATED WITHIN UNSHADED ZONE "X"; DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN (500-YEAR FLOOD).

NOTICE:
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Signature valid for one year.

NO.	DATE	REVISIONS	APP.

THIS DOCUMENT RELEASED FOR THE PURPOSE OF REVIEW ONLY, UNDER THE AUTHORITY OF RAMESH R. KALLURI, TEXAS P.E. LICENSE NO. 88076, Not intended for construction, bidding purposes.
Engineer RAMESH R. KALLURI, TEXAS P.E. LICENSE NO. 88076, PE
JULY 4 2025
P.E. Serial No.: 118959
IT IS NOT INTENDED FOR CONSTRUCTION, Date: JULY 2025
BIDDING, OR PERMIT PURPOSES.

INTERIM REVIEW
Not intended for construction, bidding or permit purposes.
RAMESH R. KALLURI
TEXAS P.E. LICENSE NO. 88076
JULY 4 2025

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: ~~ERSWARCHEZ~~
JOB NO: _____ DWG BY: ~~SALWAREZ~~

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

PROPOSED
OVERALL SITE
PLAN

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

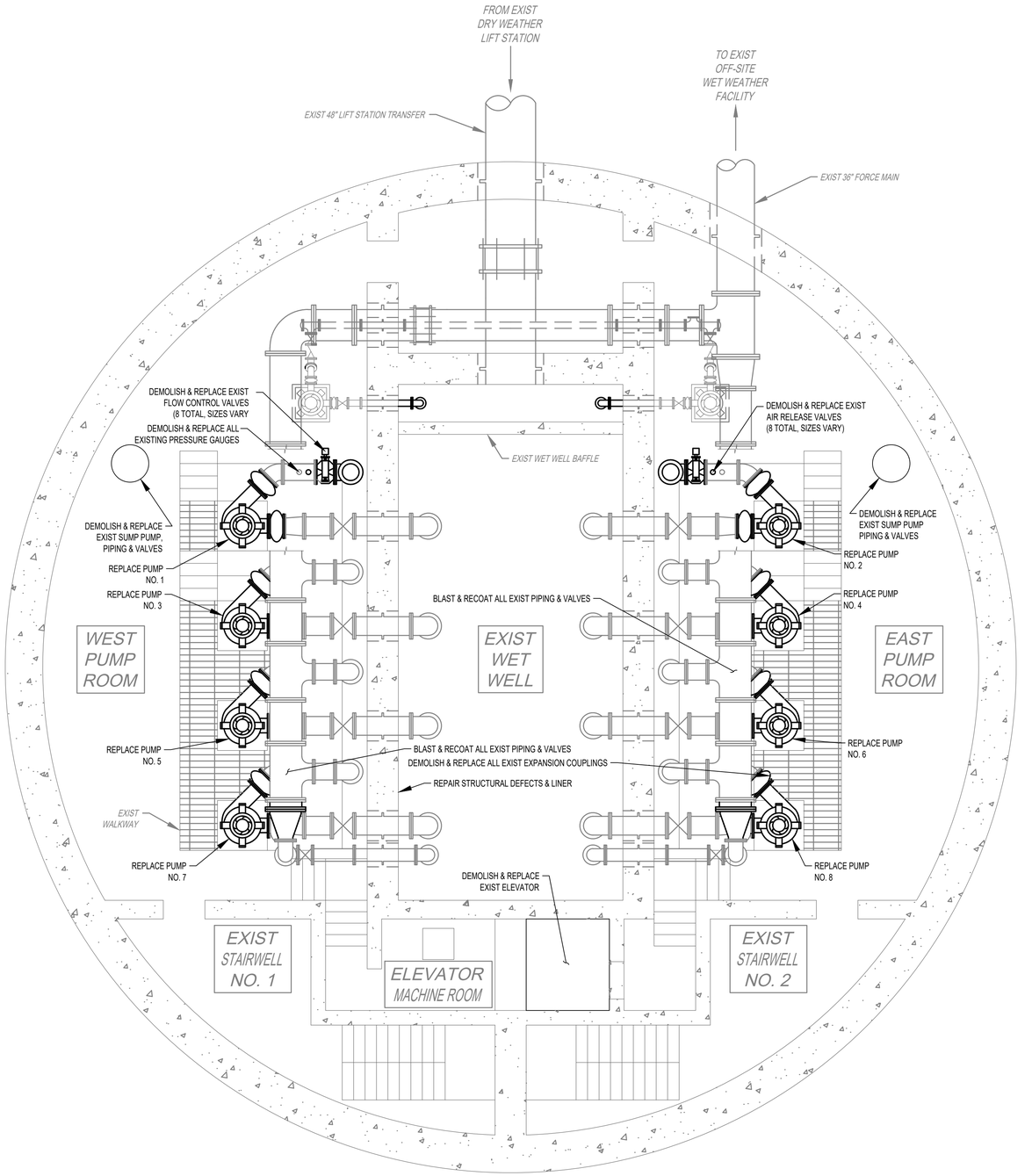
DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

DWG: E–11

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-11 Electrical Proposed Overall Site Plan.dwg

0 1 2 3 4 5

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



PROPOSED WET WEATHER LIFT STATION PUMP LEVEL

PLAN

3/16" = 1'-0"

0 1 2 3 6 12

SCALE: 3/16"=1'

NOTICE:

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NO.	DATE	REVISIONS	APP.

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE:
JOB NO:
DGN BY: RHW
DWG BY: RHW

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
WET WEATHER PUMP STATION PUMP LEVEL PLAN

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:

CATEGORY NO. SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

DWG: E–12

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-12 Electrical Wet Weather Pump Station Rehabilitation Plan.dwg

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

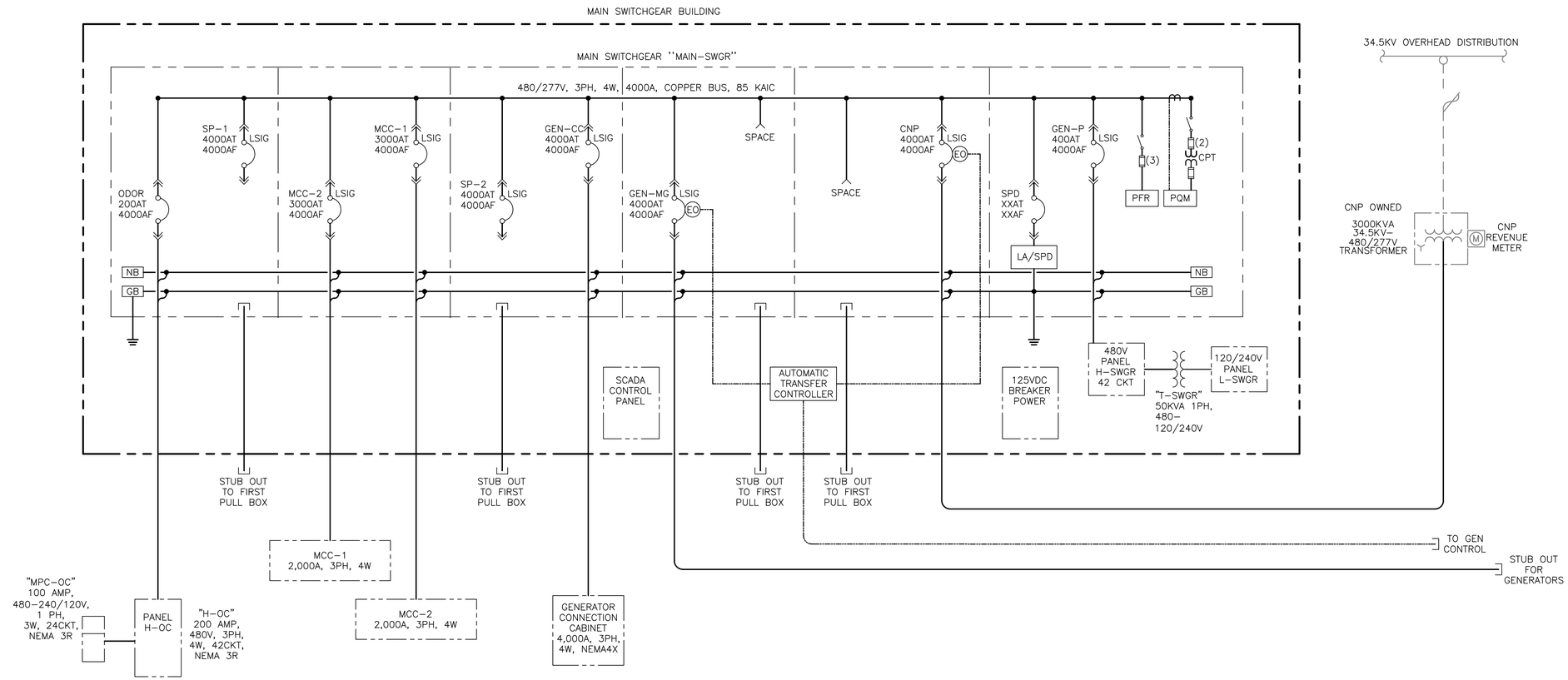
GENERAL NOTES:

A. THE MAIN ELECTRICAL BUILDING EQUIPMENT IS DESIGNED AROUND EATON BRAND, MAGNUM BREAKER SERIES SWITCHGEAR WITH MAINTENANCE BYPASS SWITCHES.

B. MAIN-SWGR SHALL CONNECT GENERATOR POWER AND UTILITY SERVICE WITH AN EATON ATC900 AUTOMATIC TRANSFER CONTROLLER TO OPERATE BREAKERS AND TRANSFER POWER.

C. LIFT STATION MCC-1 AND MCC-2 SHALL BE EATON BRAND, NEMA 12 ENCLOSED, WITH MAINTENANCE BYPASS SWITCHES.

D. ADJUSTABLE SPEED DRIVES AND REDUCED VOLTAGE SOFT STARTERS ARE ILLUSTRATED INSIDE THE MCC. FURTHER DESIGN PHASE RESEARCH WILL DETERMINE THE BEST OPTION BASED ON AVAILABILITY, LEAD TIMES AND COSTS AT THE TIME.



PROPOSED MAIN SWITCHGEAR SIMPLIFIED ONE LINE

DIAGRAM

NONE

DWG: E-13

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE:
JOB NO:
DGN BY: RHW
DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
PROPOSED OVERALL ONE LINE DIAGRAM

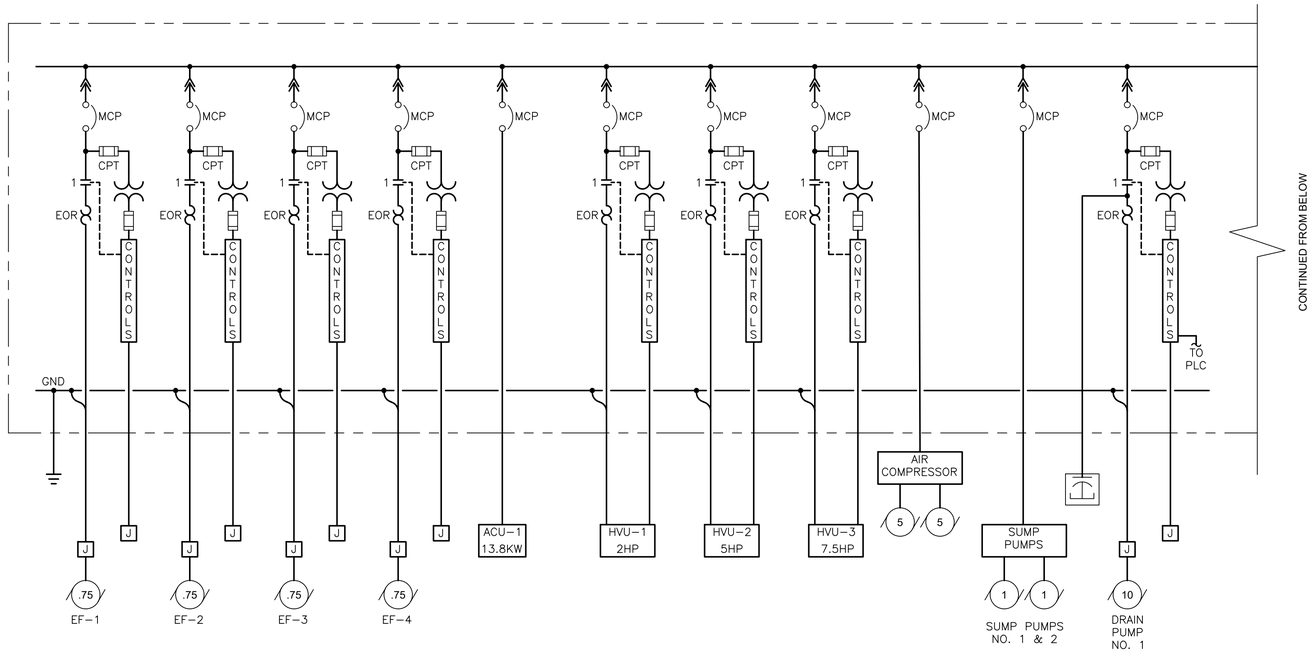
WBS #: R-000267-127A-3

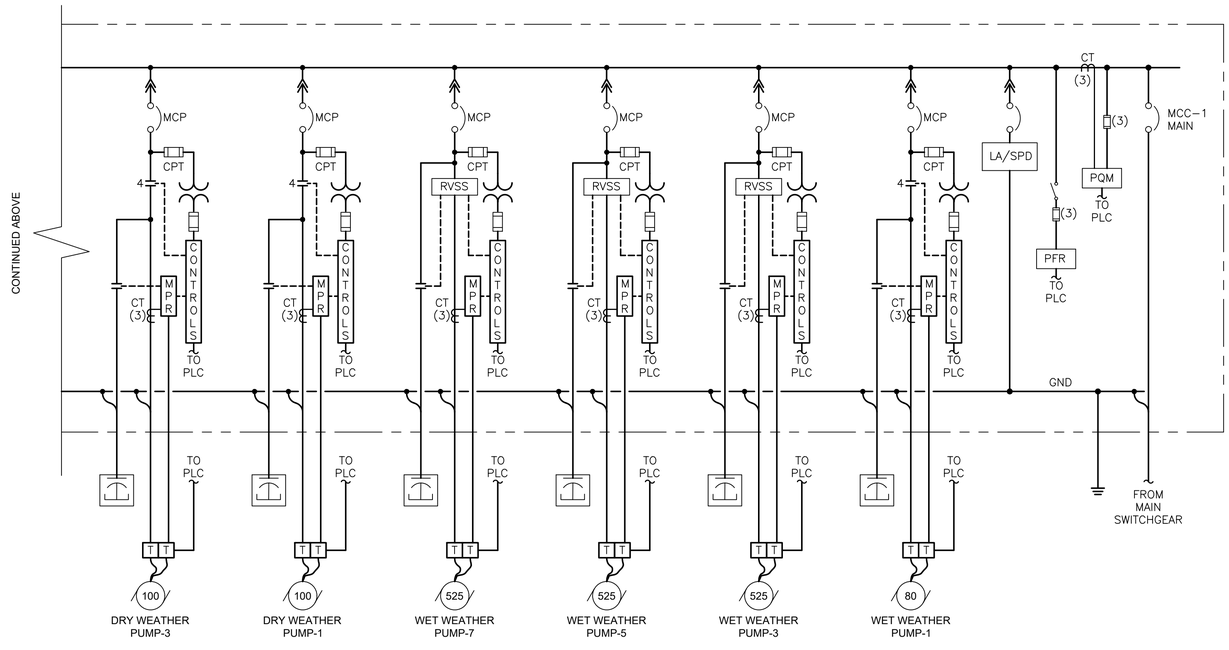
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-13 Electrical Proposed Overall One Line Diagram.dwg

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





PROPOSED MCC-1 ONE LINE

DIAGRAM

NONE

DWG: E-14

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-14 Electrical Proposed MCC-1 One Line Diagram.dwg

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

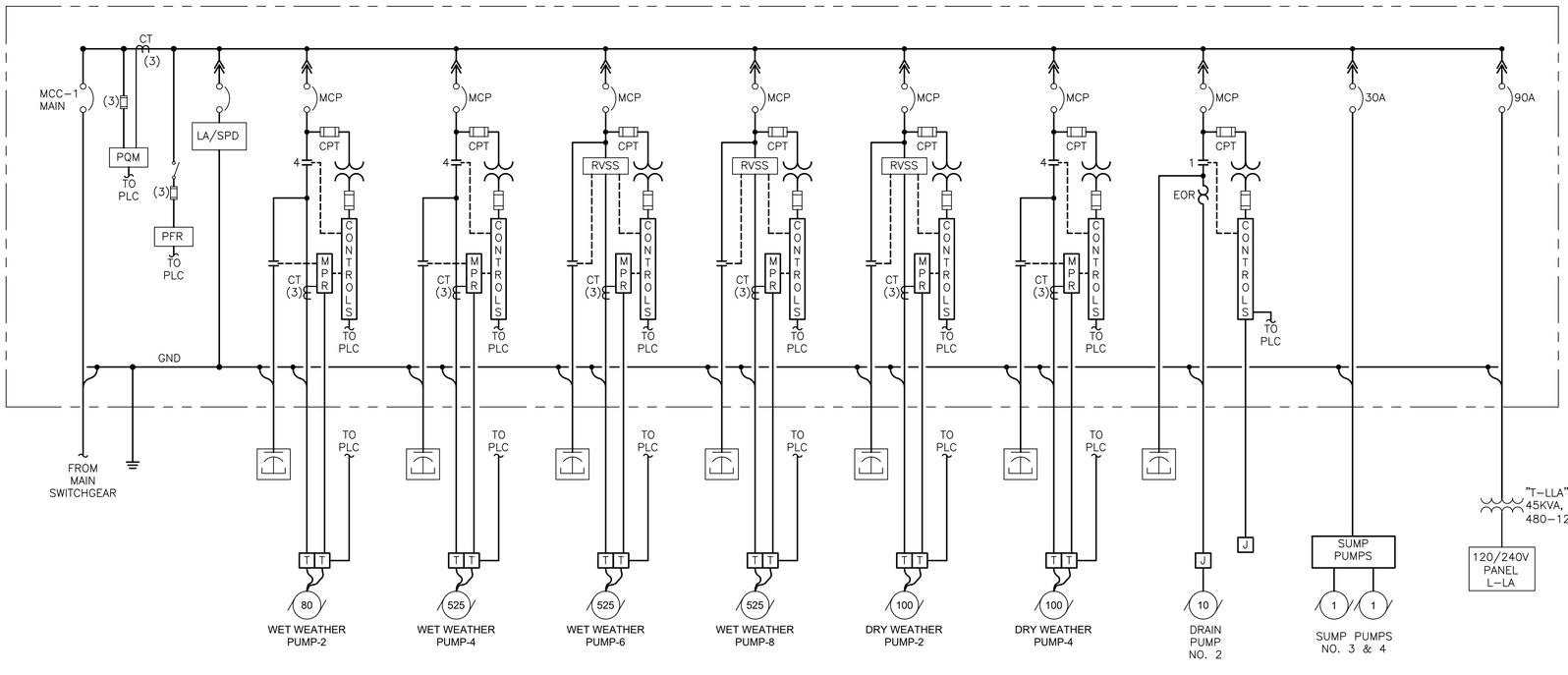
ELECTRICAL
PROPOSED MCC-1 ONE LINE
DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
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FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



PROPOSED MCC-2 ONE LINE

DIAGRAM

NONE

DWG: E–15

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
PROPOSED MCC-2 ONE LINE
DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:

CATEGORY NO. SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

NEW PANELBOARD "H-OC"
IS TO BE LOCATED ON
THE ODOR CONTROL AREA
EQUIPMENT RACK

PANEL "H-OC"

BUS AMPS 225
MAIN BRKR. AMPS 200
VOLTS 480 KAIC 35
PHASE 3 WIRE 3

NOTES
1. ALL BUSS SHALL BE COPPER.
2. BREAKERS 3P/20A UNLESS MARKED OTHERWISE
3. ADJ. CKTS. TO BAL. PNL.
4. SURFACE MOUNT, NEMA 1 PANEL INSIDE A HINGED DOOR NEMA 4X 316 STAINLESS STEEL ENCLOSURE

CKT. DESCRIPTION	WIRE	LOAD	BKR.			BKR.	LOAD	WIRE	CKT. DESCRIPTION
	12			1	2				
	12	3,730	20	3	4	20			
	12			5	6				
				7	8				
			20	9	10	20			
				11	12				
	12			13	14				
	12	1,492	20	15	16	20			
	12			17	18				
				19	20				
			20	21	22	20			
				23	24				
	4			25	26				
	4	11,190	50	27	28	20			SPARE
	4			29	30				
				43	44				
SPARE			20	45	46	50			SPARE
				47	48				
PANEL L-OC	8	3480	50	49	50	50			SPARE
	8	3480		51	52				
SPACE				53	54				SPACE
		12,660					12,300		

TOTAL VA = 24,960
25 KVA AT 480V = 31 AMPS
THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE
ALL RATED PROPERLY TO SERVE THE LOAD

NEW PANELBOARD "L-OC"
IS TO BE LOCATED ON
THE ODOR CONTROL AREA
EQUIPMENT RACK

PANEL "L-OC"

MAIN BRKR. AMPS 80
TRANSFORMER 15KVA
VOLTS 120/240 AIC 18 KA
PHASE 1 WIRE 2 SN √

NOTES
1. ALL BUSS SHALL BE COPPER.
2. BREAKERS 1P/20A UNLESS MARKED OTHERWISE.
3. ADJ. CKTS. TO BAL. PNL.
4. SURFACE MOUNT, NEMA 3R SS
5. INSTALL MINI POWER CENTER WITH PANEL COVER HINGE AT 72" AFF.

CKT. DESCRIPTION	WIRE	LOAD	BKR.			BKR.	LOAD	WIRE	CKT. DESCRIPTION
	12	100	20	1	2	20			
	12	360	20	3	4	20			
	12	60	20	5	6	20			
	12	100	20	7	8	20			
	12	360	20	9	10	20			
	12	60	20	11	12	20			
	12	60	20	13	14	20	60	12	
	12	60	20	15	16	20			
			20	17	18	20			
SPARE			20	19	20	20	80	12	
SPARE			20	21	22	20			SPARE
FUTURE 1 CL-120			20	23	24	20			SPARE
FUTURE 2 CL-120			20	25	26	20	180	12	RACK OUTLET
		1,830		NEUT	GND		1,650		

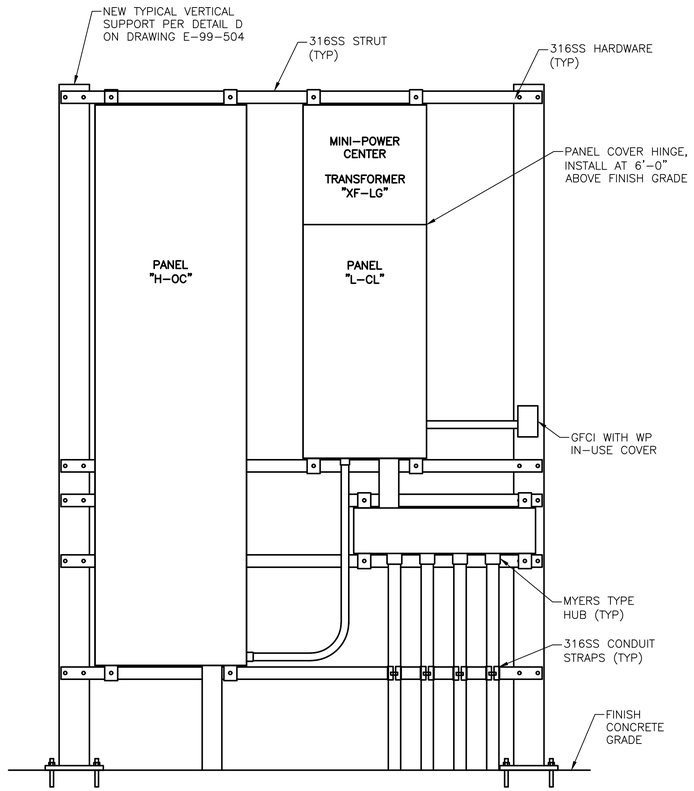
TOTAL VA = 3,480
3.5 KVA AT 240V = 14.5 AMPS
THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE
ALL RATED PROPERLY TO SERVE THE LOAD

ODOR CONTROL AREA PANELBOARD
SCHEDULES
NTS

GENERAL NOTES:

A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE ODOR CONTROL AREA ELECTRICAL RACK AND PANELBOARD SCHEDULES.

B. CONDUITS REQUIRED MAY NOT BE ILLUSTRATED ON ALL DRAWINGS SHOWING AN AREA. REFER TO THE CONDUIT AND CONDUCTOR SCHEDULES FOR MORE INFORMATION.



ODOR CONTROL AREA EQUIPMENT RACK
ELEVATION
NTS

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TEXAS P.E. NO. 68078
JULY 2025
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Houston, Texas 77094
Phone: (713)-365-9288

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE:
JOB NO:
DGN BY: RHW
DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
ODOR CONTROL RACK & PANELBOARD SCHEDULES

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

DWG: E-16

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

PANEL "LLA"

BUS AMPS 250
MAIN BRKR. AMPS 225 WIRE SIZE 4/0 AWG
VOLTS 208/120 AIC 34 KA
PHASE 3 WIRE 4 SN ✓

NOTES

225

CKT. DESCRIPTION	WIRE	LOAD	BKR.	A	B	C		BKR.	LOAD	WIRE	CKT. DESCRIPTION
ELECTRICAL ROOM LIGHTING	–	800	20	1			2	20	600	–	STAIRWELL LIGHTING
ELECTRICAL ROOM LIGHTING	–	800	20	3			4	20	500	–	DRAIN PUMP & STORAGE LIGHTING
ELECTRICAL ROOM RECEPTACLES	–	1200	20	5			6	20	400	–	DRAIN PUMP & STORAGE RECEPTACLES
MECHANICAL ROOM LIGHTING	–	800	20	7			8	20	800	–	MOTOR CONTROL CENTER SPACE HEATERS
MECHANICAL ROOM EXIT/EMERGENCY LIGHTS	–	600	20	9			10	20	–	–	ELECTRICAL ROOM AIR COMPRESSOR
MECHANICAL ROOM RECEPTACLES	–	1200	20	11			12	20	800	–	BATHROOM BASEBOARD HEATER
MOTOR ROOM WEST LIGHTING	–	1400	20	13			14	20	1500	–	HOT WATER HEATER
MOTOR ROOM WEST RECEPTACLES	–	400	20	15			16	20	500	–	IRRIGATION CONTROLLER
MOTOR ROOM EAST LIGHTING	–	1400	20	17			18	30	500	–	TEMPURATURE CONTROL PANEL TCP–1
MOTOR ROOM EAST RECEPTACLES	–	400	20	19			20	30	1500	–	DRINKING WATER FOUNDATION
PUMP ROOM WEST LIGHTING	–	1100	20	21			22	20	1000	–	AIR HAND DRYER
PUMP ROOM WEST RECEPTACLES	–	400	20	23			24	20	600	–	CHEMICAL FEED SYSTEM
PUMP ROOM EAST LIGHTING	–	1100	20	25			26	20	600	–	EXHAUST FANS 5&6
PUMP ROOM EAST RECEPTACLES	–	400	20	27			28	20	400	–	EXHAUST FANS 7&8
OUTDOOR BUILDING LIGHTING	–	800	20	29			30	20	–	–	LIGHTING CONTACTOR/PHOTOCELL CONTROLS
OUTDOOR SITE LIGHTING	–	1000	20	31			32	20	–	–	ELEVATOR CAB LIGHTING
ELEVATOR EQUIPMENT ROOM A/C UNIT	–	400	20	33			34	20	–	–	ELEVATOR PIT LIGHTING
SPARE	–	600	20	35			36	20	900	–	SPARE
WET WEATHER CONTROL PANEL	–	900	20	37			38	20	–	–	SPARE
UPS SYSTEM	–	1800	20	39			40	20	–	–	SPARE
LEVEL TRANSMITTERS	–	–	20	41			42	20	–	–	SPARE
		1725							15100		

TOTAL = 16,825 VA

PROPOSED

DWG: E–17

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
PANELBOARD
SCHEDULES

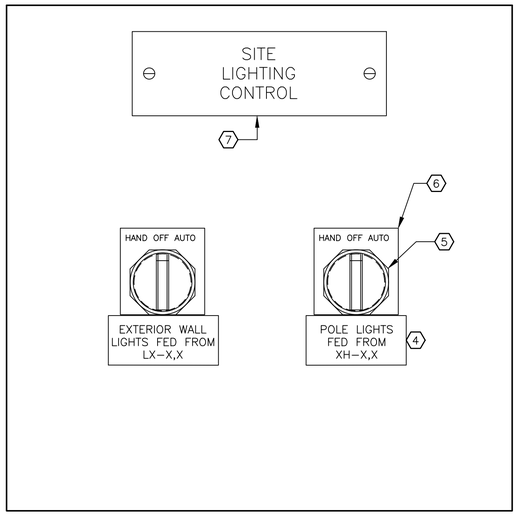
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CITY OF HOUSTON
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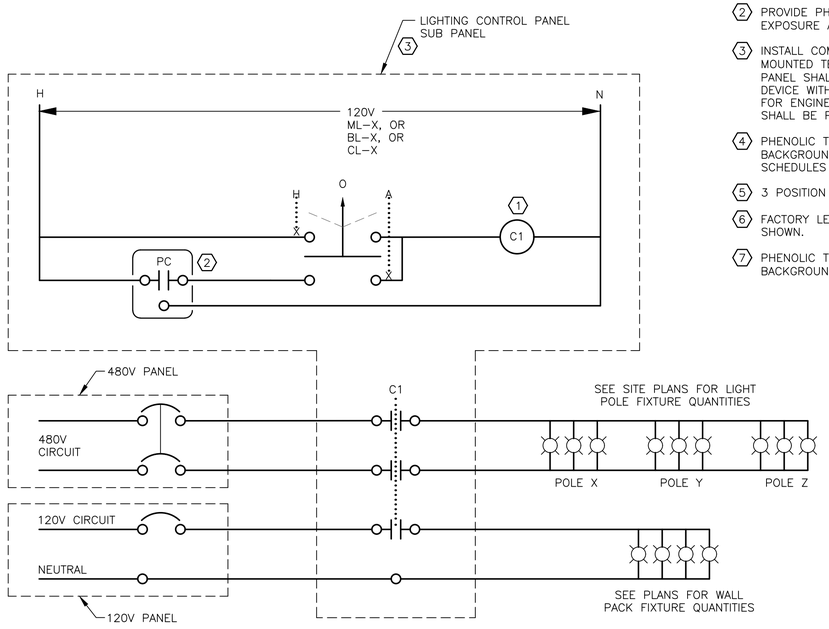
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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



TYPICAL LIGHTING CONTROL PANEL
FRONT



TYPICAL LIGHTING CONTROL PANEL
WIRING SCHEMATIC

NOTES:

1. PROVIDE EATON "CN35 SERIES" (OR EQUAL) ELECTRICALLY HELD LIGHTING CONTACTOR, WITH MINIMUM OF TWO SPARE CONTACTS PER CONTACTOR.
2. PROVIDE PHOTOCELL 4' MINIMUM ABOVE ROOF LINE LOCATED WITH NORTHERN EXPOSURE AND PROVEN FUNCTIONAL FOR SUNSET TO SUNRISE OPERATION.
3. INSTALL COMPONENTS ON SUB PANEL, PROVIDE FIELD WIRING AND RAIL MOUNTED TERMINAL BLOCKS (30A MIN.). ALL CONDUCTORS TO/FROM CONTROL PANEL SHALL PASS THROUGH TERMINAL BLOCKS BEFORE CONNECTION TO DEVICE WITHIN THE PANEL. PANEL WIRING SHOP DRAWING SHALL BE SUBMITTED FOR ENGINEER APPROVAL AND A PERMANENT COPY OF APPROVED DRAWING SHALL BE PROVIDE IN POCKET INSIDE ON PANEL DOOR.
4. PHENOLIC THREE LAYER NAMEPLATE WITH 3/16" BLACK LETTERS ON WHITE BACKGROUND, INDICATE CIRCUIT NUMBERS FOR EACH CIRCUIT. SEE PANEL SCHEDULES FOR RELATED CIRCUITS.
5. 3 POSITION SELECTOR SWITCH WITH SEALED MAINTAINED CONTACTS.
6. FACTORY LEGEND PLATE WITH 3/16" BLACK TEXT ON WHITE LABELED AS SHOWN.
7. PHENOLIC THREE LAYER NAMEPLATE WITH 3/8" BLACK LETTERS ON WHITE BACKGROUND.

LIGHT FIXTURE SCHEDULE

TYPE	CATALOG NUMBER	DESCRIPTION	LAMPS	INPUT VOLTAGE	INPUT WATTS	REMARKS
A	LITHONIA CLX–L48–7000LM–HEF–WDL–MVOLT–GZ10–50K–80CRI–WH–A268	WHITE LINEAR 48" LED FIXTURE WITH WIDE DIFFUSE LENS AND HIGH EFFICIENCY PACKAGE	LED	120	45	INSTALL SUSPENDED FIXTURE ROWS ON CONTINUOUS TYPE 316 S.S. 1⅝" X 1⅝" STRUT SUSPENDED BY ¼" TYPE 316 S.S. THREADED RODS. SINGLE FIXTURES TO BE INSTALLED SIMILAR TO THAT DESCRIBED FOR FIXTURE ROWS.
AS	LITHONIA CSVT–L48–5000LM–MVOLT–SWW3–80CRI	VAPOR TIGHT LED STRIP LIGHT FIXTURE USED FOR OUTDOOR AND CANOPIES.	LED	120	42	INSTALL FIXTURE UNDER THE CANOPIES.
B	LITHONIA WST–LED–P3–50K–VF–MVOLT–E20WC–DDBXD–A268	DARK BRONZE ALUMINUM WALL PACK LED FIXTURE WITH 90 MINUTE EMERGENCY BATTERY PACK.	LED	120	50	INSTALL FIXTURE WITH TOP AT ONE FOOT BELOW ROOF.
C	LITHONIA ELT24–W–MT–H–A268 WITH ELAMSTS MOUNTING SHELF. PAINT SHELF WHITE.	EMERGENCY FIXTURE WITH TWO HEADS AND SEALED LEAD ACID 90 MINUTE BATTERY.	HALOGEN	120	20	INSTALL FIXTURE WITH BOTTOM OF FIXTURE AT 10'–0" ABOVE THE FLOOR. ADD A CORD WITH PLUG TO THE FIXTURE AND PLUG THE CORD INTO A RECEPTACLE MOUNTED TO THE SIDE OF THE FIXTURE.
X	LITHONIA LQM–S–W–3–R–120/277–ELN	WHITE LED EXIT SIGN FIXTURE IN A THERMOPLASTIC HOUSING WITH RED LETTERS AND NICKEL CADMIUM BATTERY	LED	120	1	INSTALL A FIXTURE ABOVE EACH EXIT DOOR.
S	EATON EVLEDJ4C701	STANCHION LED FIXTURE	LED	120	53	INSTALL STANCHION LIGHT FIXTURE TO THE POLE MOUNTED TO THE HANDRAIL.
P	LITHONIA DSXF3–LED–6–P2–50K–WFL–480–IS–0DF–DNAXD–A268	SITE LIGHTING	LED	480	138	INSTALL ON TOP OF CONCRETE LIGHTING POLE.

DWG: E–18

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
LIGHT FIXTURE SCHEDULE AND CONTROL DIAGRAM

WBS #: R-000267-127A-3

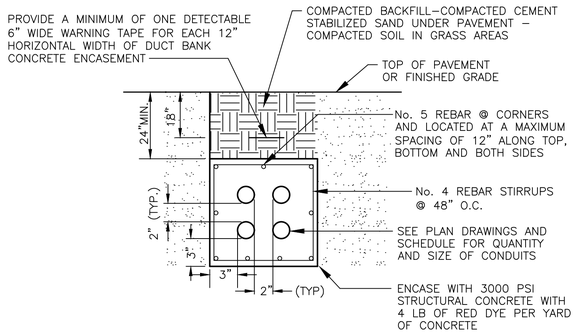
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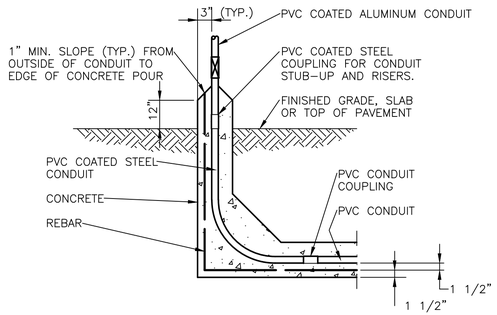
0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

DUCT BANK CONCRETE ENCASEMENT SHALL BE CONTINUOUS AND DUCT BANK REINFORCEMENT REBAR SHALL BE CONNECTED TO THE DESTINATION. FOR PULL BOX ENTRY OR RISING NEXT TO A STRUCTURE DRILL BOX OR STRUCTURE AND PROVIDE #5 DOWELS 4 INCHES DEEP. FOR ENTRY TO STRUCTURE SLAB OR FOUNDATIONS CONNECT BOTH REINFORCEMENT REBAR SYSTEMS WITH 6 INCH OVERLAP DOUBLE TIED.



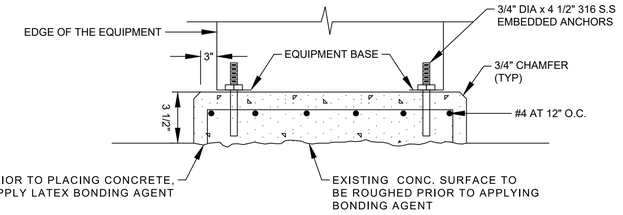
TYPICAL DUCT BANK INSTALLATION

DETAIL 1 / NTS



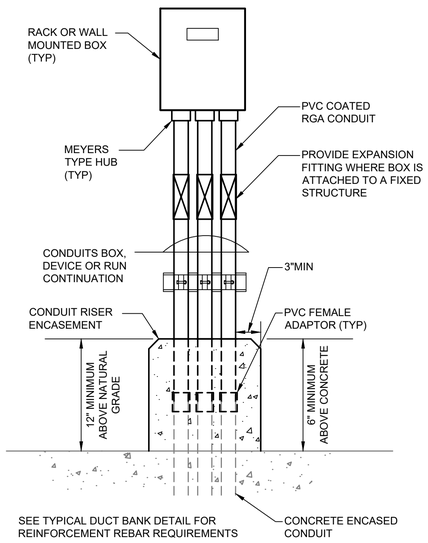
TYPICAL SINGLE CONDUIT DUCT BANK STUB–UP

DETAIL 3 / NTS



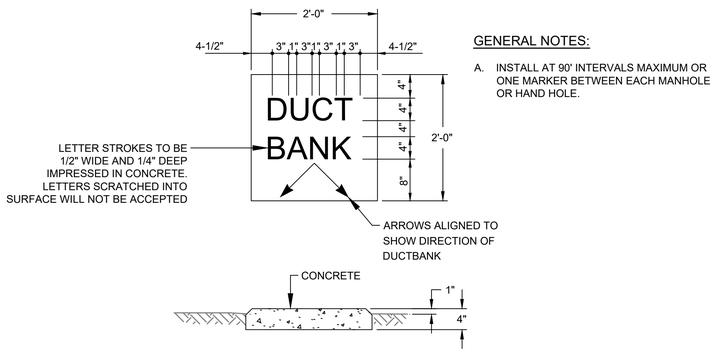
EQUIPMENT HOUSEKEEPING CONCRETE PAD

DETAIL 4 / NTS



CONDUIT RISER CONCRETE ENCASEMENT

DETAIL 2 / NTS



GENERAL NOTES:

A. INSTALL AT 90' INTERVALS MAXIMUM OR ONE MARKER BETWEEN EACH MANHOLE OR HAND HOLE.

CONCRETE DUCT BANK MARKER

DETAIL 5 / NTS

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
DETAILS
SHEET 1

WBS #: R-000267-127A-3

CITY OF HOUSTON
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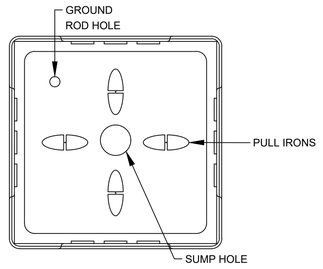
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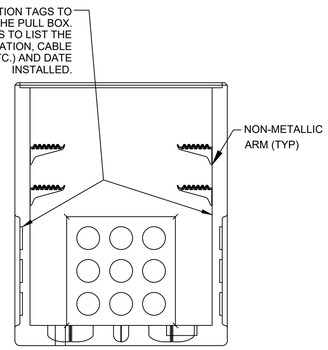
DWG: E–19

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



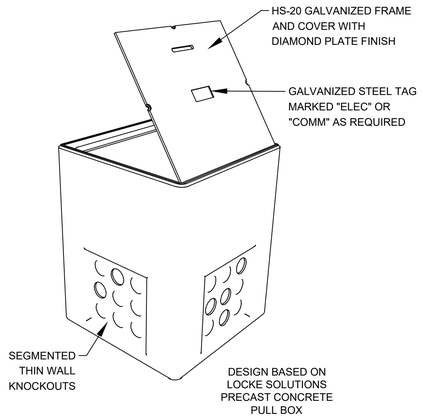
PLAN VIEW



ELEVATION VIEW

PULL BOX SIZES			
DESIGANTION	INSIDE WIDTH (W)	INSIDE LENGTH (L)	INSIDE DEPTH (D)
E1	12"	24"	22"
E2	24"	24"	42"
E3	36"	36"	48"
E4	48"	48"	48"
E5	48"	48"	60"
I1	12"	24"	22"
I2	24"	24"	42"
I3	36"	36"	48"
I4	48"	48"	48"

NOTES:
1. COVERS FOR ALL PULL BOXES TO BE HOT-DIP GALVANIZED AND DESIGNED FOR AASHTO HS-20 LOADING.
2. "E" PULL BOXES TO HAVE "ELEC" TAG ON THE COVER.
3. "I" PULL BOXES TO HAVE "COMM" TAG ON THE COVER.
4. "C" PULL BOXES TO HAVE "CONTROLS" TAG ON THE COVER.

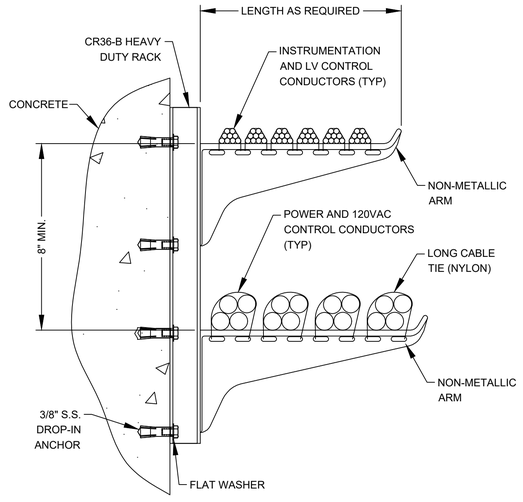


ELECTRICAL PULL BOX
DETAIL 1
NTS -

PULL BOX NOTES:

A. PROVIDE UNDERGROUND DEVICES CABLE RACK SYSTEMS AS REQUIRED TO SUPPORT CABLES ROUTED AROUND THE WALLS OF THE UNDERGROUND PULL BOX.

B. CABLES SHALL BE SECURED TO RACK ARMS WITH CABLE TIES, PROVIDE UNDERGROUND DEVICES, INC. NO. 36 VERTICAL RACK WITH 14" ARMS AS REQUIRED. SECURE RACKS TO PULL BOX WALLS WITH 316 SS HARDWARE.



PULL BOX CABLE RACK INSTALLATION
DETAIL 2
NTS -

DWG: E–20

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ELECTRICAL
DETAILS
SHEET 2

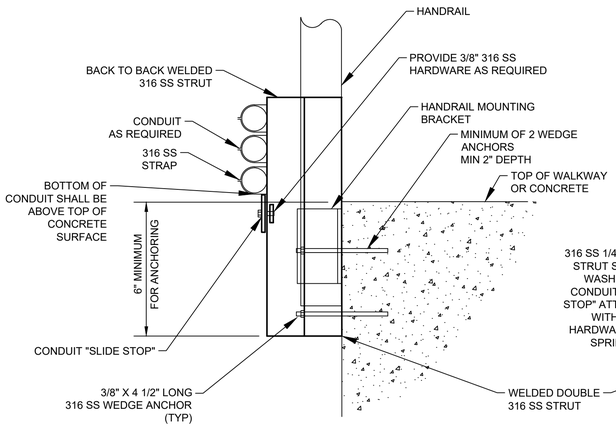
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HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

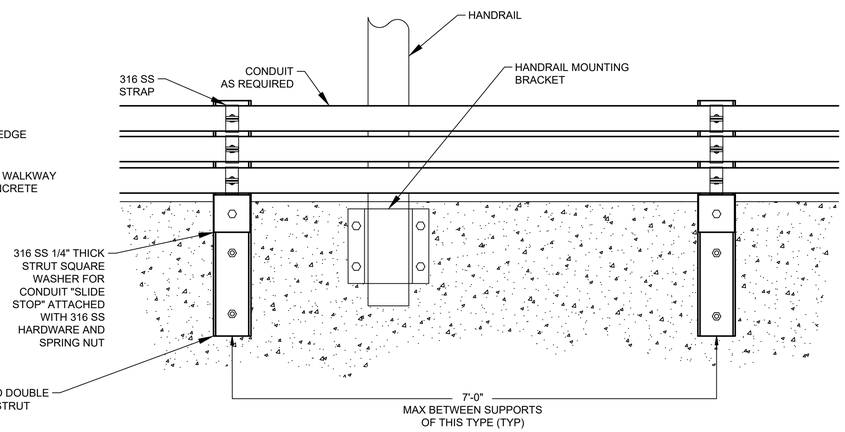
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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



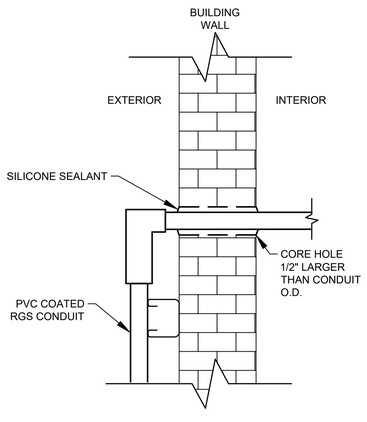
SIDE VIEW
EDGE OF STRUCTURE CONDUIT SUPPORT

A DETAIL
NTS



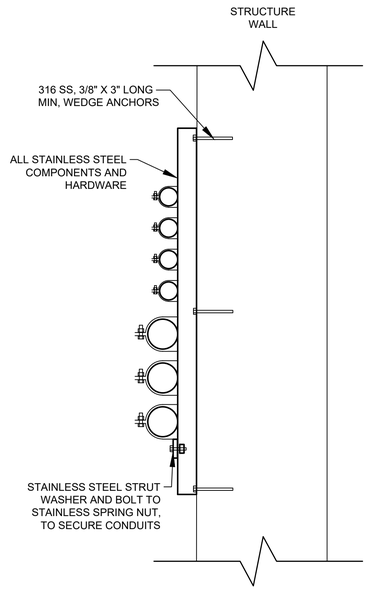
ELEVATION
EDGE OF STRUCTURE CONDUIT SUPPORT

B DETAIL
NTS



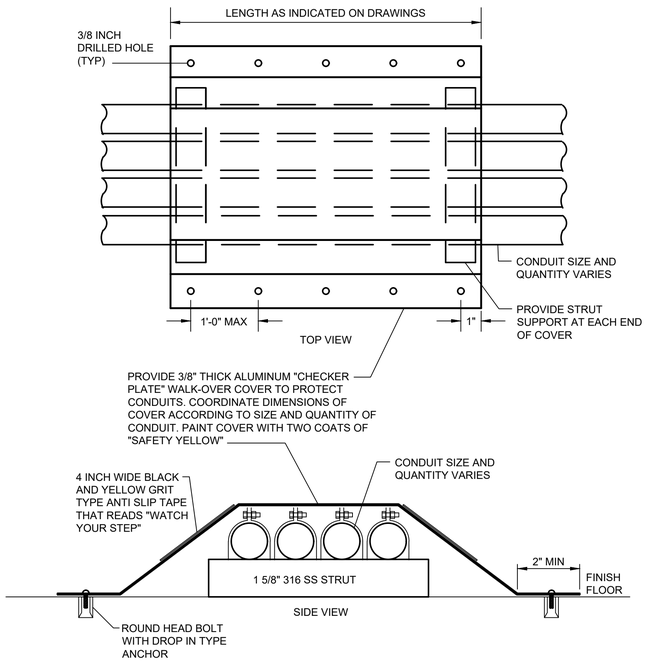
TYPICAL WALL PENETRATION

C DETAIL
NTS



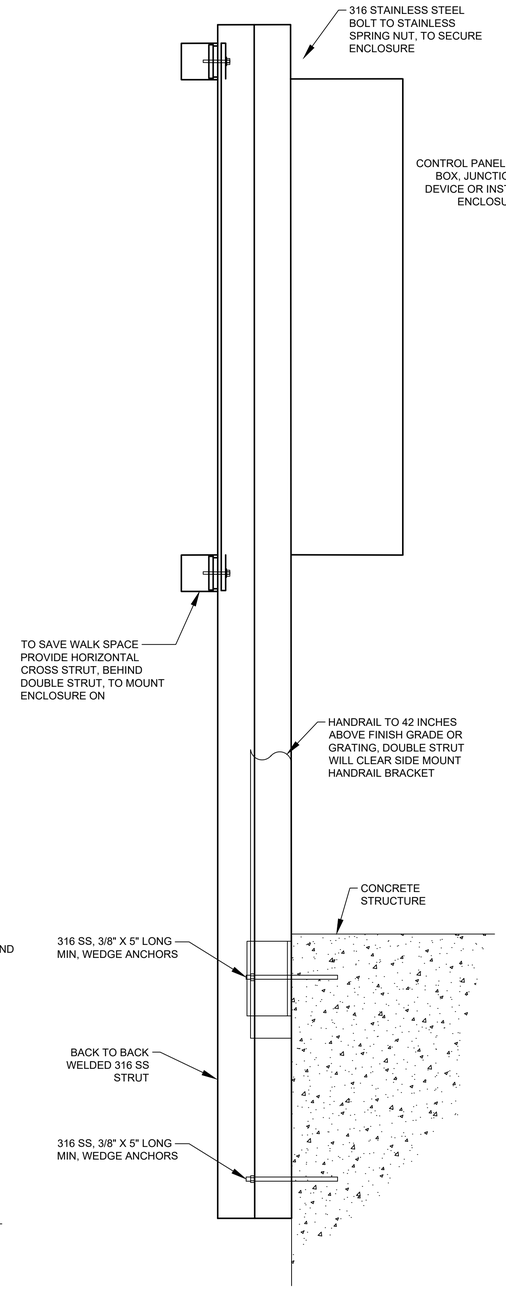
TYPICAL VERTICAL WALL RACK

D DETAIL
NTS



TYPICAL WALK-OVER TREAD PLATE

E DETAIL
NTS



EDGE OF STRUCTURE PANEL SUPPORT

F DETAIL
NTS

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JULY 2025
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16300 Katy Freeway, Suite 172
Houston, Texas 77094
Phone: (713)-365-9288

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE:
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DGN BY: RHW
DWG BY: RHW

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
DETAILS
SHEET 3

WBS #: R-000267-127A-3

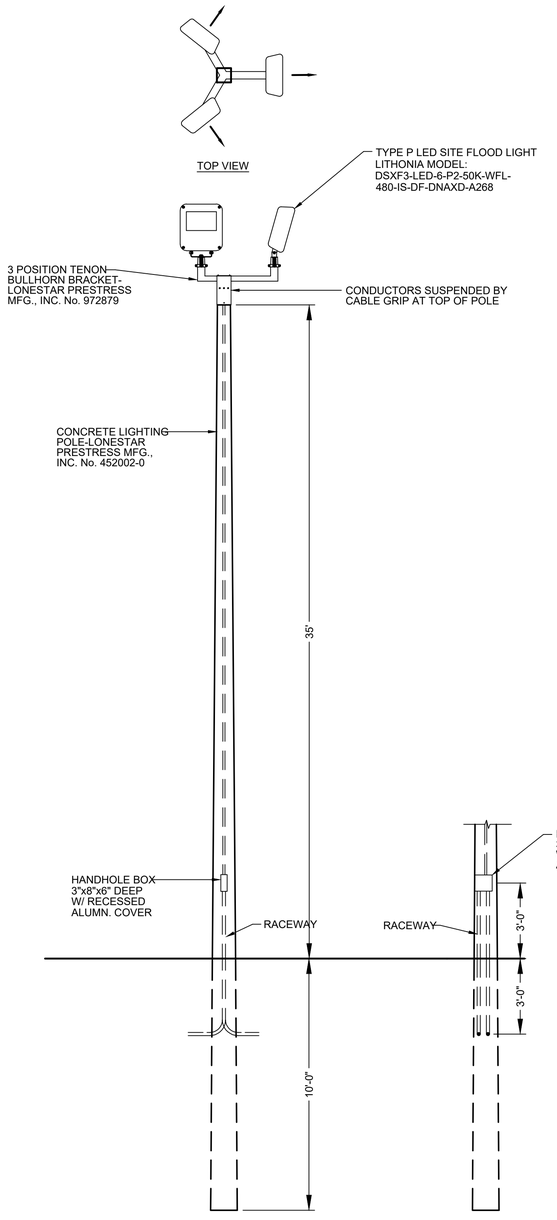
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. 13 OF
FOR CITY OF HOUSTON USE ONLY

DWG: E-21

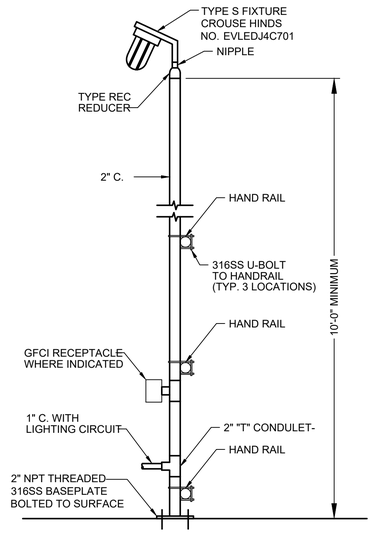
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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



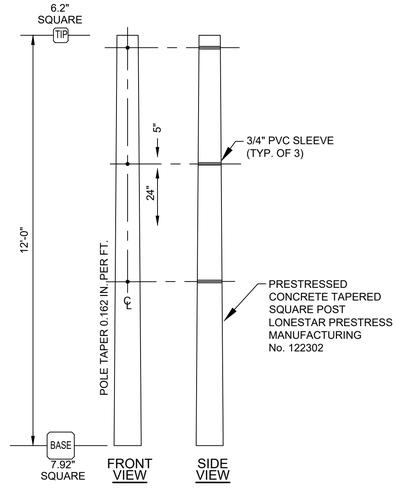
SITE LIGHT

A DETAIL
NTS



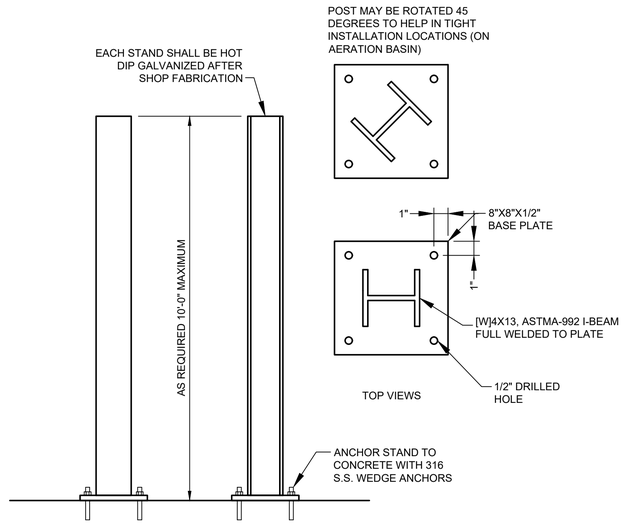
CONDUIT MOUNTED STANCHION LIGHT FIXTURE

B DETAIL
NTS



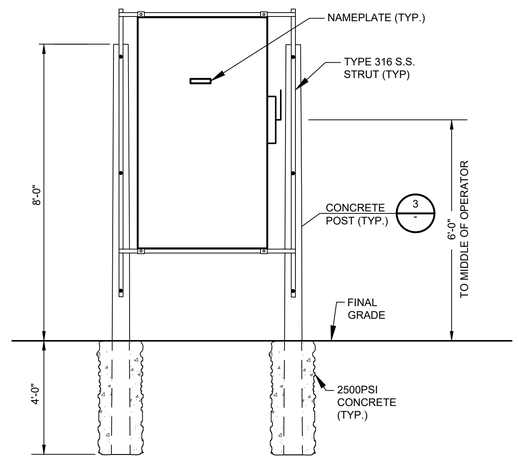
CONCRETE POST DETAIL

C DETAIL
NTS



VERTICAL SUPPORT

D DETAIL
NTS



MOBILE GENERATOR CONNECTION CABINET SUPPORT

E DETAIL
NTS

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16300 Katy Freeway, Suite 172
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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
DETAILS
SHEET 4

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:

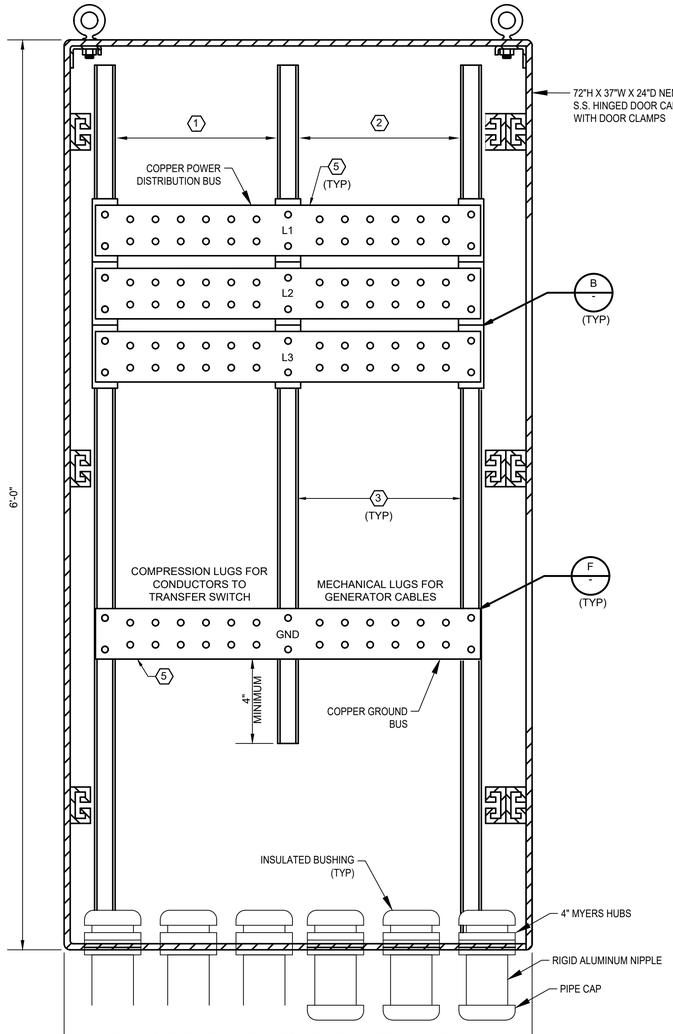
CATEGORY NO. SHEET NO. OF

FOR CITY OF HOUSTON USE ONLY

DWG: E–22

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-22 Electrical Details Sheet 4.dwg

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

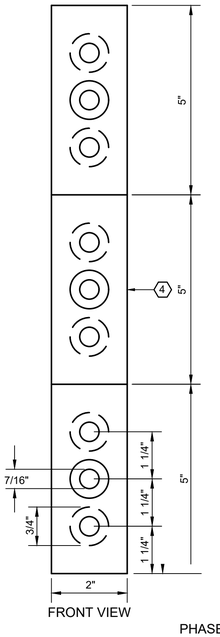


MOBILE GENERATOR CONNECTION CABINET ELEVATION

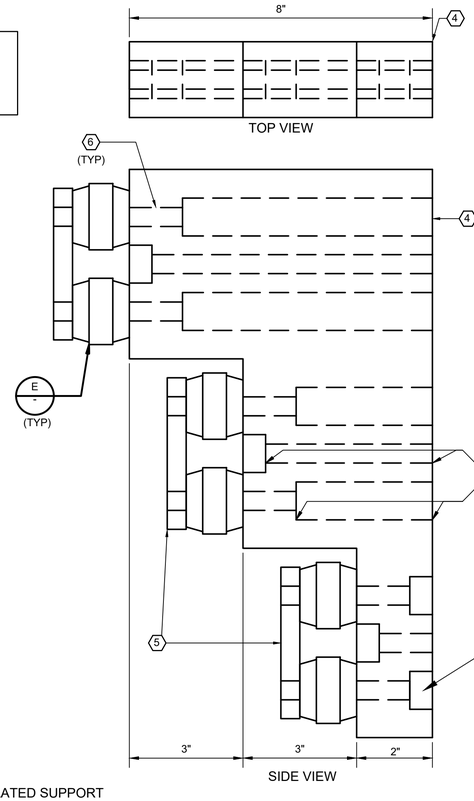
MOBILE GENERATOR CONNECTION CABINET BOTTOM VIEW

A DETAIL
NTS

CONTRACTOR SHALL PROVIDE A SHOP DRAWING FOR THE GENERATOR CONNECTION CABINET.



FRONT VIEW



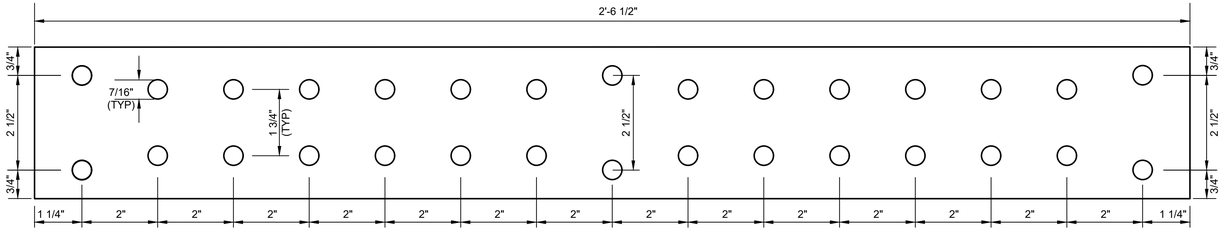
SIDE VIEW

PHASE BUS INSULATED SUPPORT

B DETAIL
NTS

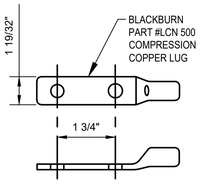
NOTES:

1. CABLES CONNECTED TO TRANSFER SWITCH.
2. PROVISIONS TO CONNECT PORTABLE GENERATOR CABLES.
3. TYPE 316 STAINLESS STEEL 1 5/8" 12 GAUGE STRUT.
4. 2" THICK MICARTA INSULATING BOARD.
5. 1/2" X 4" COPPER BAR.
6. TYPE 316 STAINLESS STEEL BOLTS.



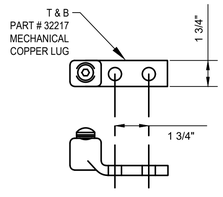
TYPICAL BUS HOLE LAYOUT

C DETAIL
NTS



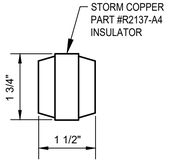
LUGS FOR CABLES TO TRANSFER SWITCH

D DETAIL
NTS



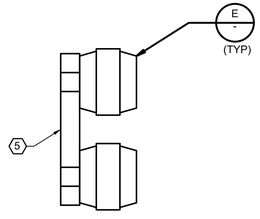
LUGS FOR CABLES TO PORTABLE GENERATOR

E DETAIL
NTS



INSULATOR

F DETAIL
NTS



GROUND BUS INSULATED SUPPORT

G DETAIL
NTS

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CITY OF HOUSTON
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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
DETAILS
SHEET 5

WBS #: R-000267-127A-3

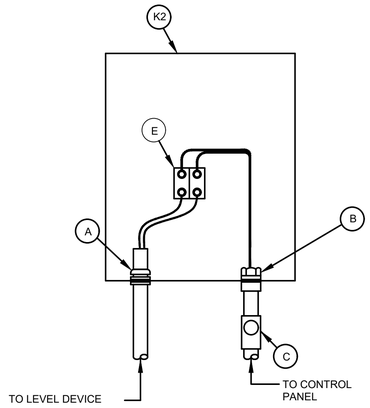
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
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DWG: E-23

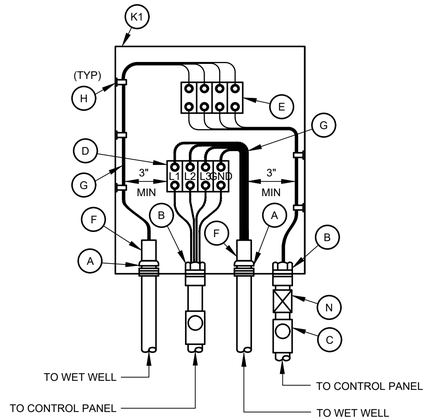
C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-23 Electrical Details Sheet 5.dwg

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



LEVEL SIGNAL JUNCTION BOX

A DETAIL
NTS



PUMP CABLE JUNCTION BOX

B DETAIL
NTS

JUNCTION BOX EQUIPMENT SCHEDULE

- A - OZ GEDNEY CSBE SEAL WITH 316 S.S. PRESSURE PLATES AND HARDWARE
- B - WATERTIGHT CONDUIT HUB WITH INSULATED BUSHING
- C - CLASS I, DIV 1, EXLOSION PROOF SEAL INSTALLED PER NEC DIV 501
- D - POWER TERMINAL BLOCK W/SCREW DOWN BOX LUGS
- E - CONTROL TERM BLOCK W/SCREW DOWN BOX LUGS
- F - MULTI-CONDUCTOR CABLE, REMOVE OUTER JACKET AS SHOWN
- G - WIRING AS SCHEDULED
- H - WIRING HARNESS PERMANENTLY AFFIXED
- I - PUMP CONTROL WIRING FROM PUMPS 2; 2 & 3; 4; OR D2, AS APPLICABLE
- J - 1 1/2" PVC COATED CONDUIT NIPPLE
- K1 - NEMA 4X 316 STAINLESS STEEL JUNCTION BOX WITH GASKETED FRONT COVER, SINGLE QUARTER TURN, OIL-TIGHT LATCH AND PADLOCKING PROVISIONS, HOFFMAN A24H2010SS6LP OR EQUAL. MINIMUM SIZE: 20"W X 24"H X 10"D
- K2 - NEMA 4X 316 STAINLESS STEEL JUNCTION BOX WITH GASKETED FRONT COVER, SINGLE QUARTER TURN, OIL-TIGHT LATCH AND PADLOCKING PROVISIONS, HOFFMAN A16H1206SS6LP OR EQUAL. MINIMUM SIZE: 12"W X 16"H X 6"D
- L - NAMEPLATE, 3/8" HIGH LETTERS IN WHITE ON BLACK BAKELIGHT (SEE NAMEPLATE SCHEDULE)
- M - TRANSDUCER BREATHER PERMANENTLY AFFIXED
- N - EXPANSION JOINT/SLEEVES

GENERAL NOTES:

A. NAMEPLATES SHALL BE MOUNTED TO JUNCTION BOXES USING 316 STAINLESS STEEL HARDWARE.

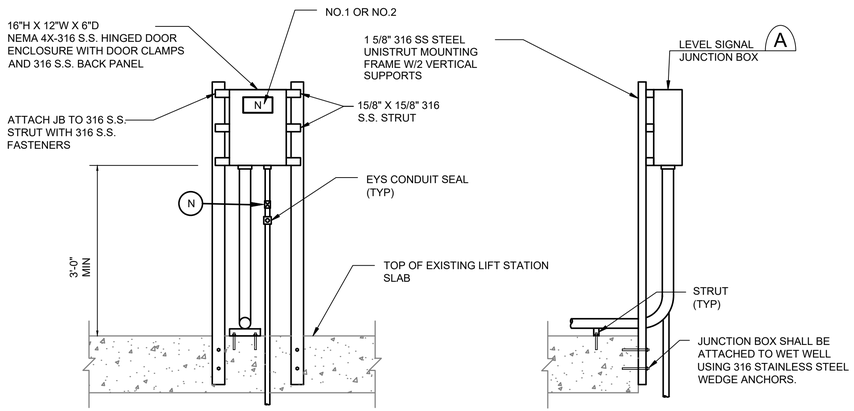
B. MAINTAIN MINIMUM SEPARATION REQUIRED UNDER NEC ARTICLE 504, BETWEEN INTRINSICALLY SAFE CONTROL WIRING AND NON-INTRINSICALLY SAFE MOTOR FEEDER WIRING.

D. UNLESS OTHERWISE NOTED, ALL EXPOSED CONDUITS SHALL BE PVC COATED RIGID GALVANIZED STEEL.

E. UNLESS OTHERWISE NOTED, ALL NUTS, BOLTS, SCREWS WASHERS, ETC SHALL BE TYPE 316 STAINLESS STEEL.

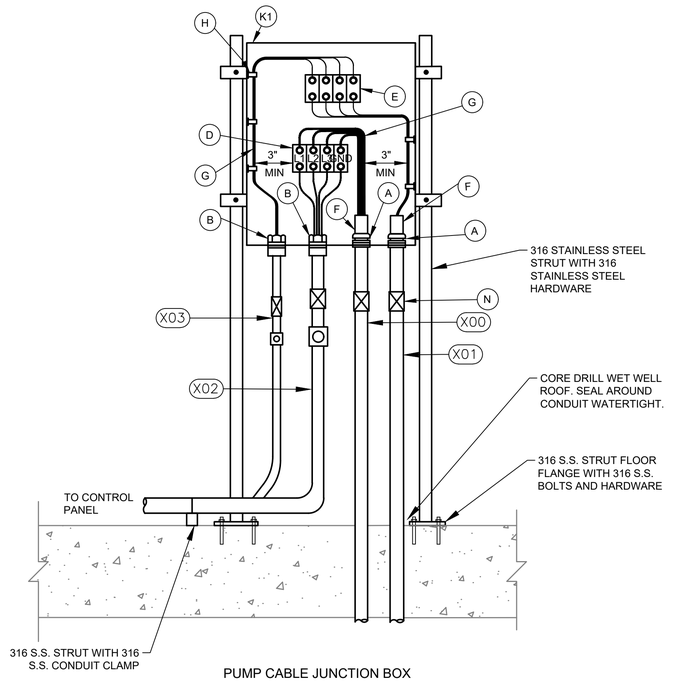
F. ALL UNDERGROUND CONDUITS TO BE ENCASED IN REINFORCED CONCRETE DUCT BANK.

G. PROVIDE ANTI-CORROSIVE SPRAY ON ANY BARE METAL PARTS OR EXPOSED WIRE.



LEVEL SIGNAL JUNCTION BOX ELEVATION

C DETAIL
NTS



PUMP CABLE JUNCTION BOX

D DETAIL
NTS

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
DETAILS
SHEET 6

WBS #: R-000267-127A-3

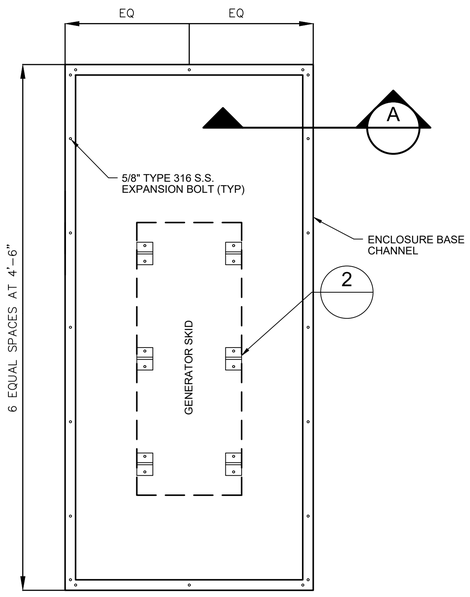
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DWG: E-24

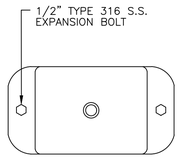
C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Electrical\E-24 Electrical Details Sheet 6.dwg

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

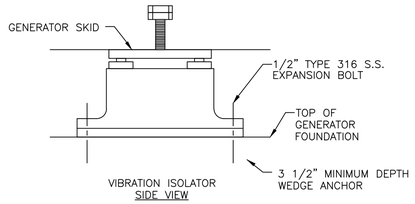


ENCLOSURE INTERFACE
DETAIL 1
N.T.S.

GENERATOR CONCEPT AND DIMENSIONS ARE APPROXIMATE, COORDINATE GENERATOR FOUNDATION AND ITS INSTALLATION WITH THE CONTRACTOR'S PROPOSED GENERATOR SHOP DRAWING INFORMATION, PROVIDED BY THE GENERATOR AND ENCLOSURE MANUFACTURER'S VENDOR

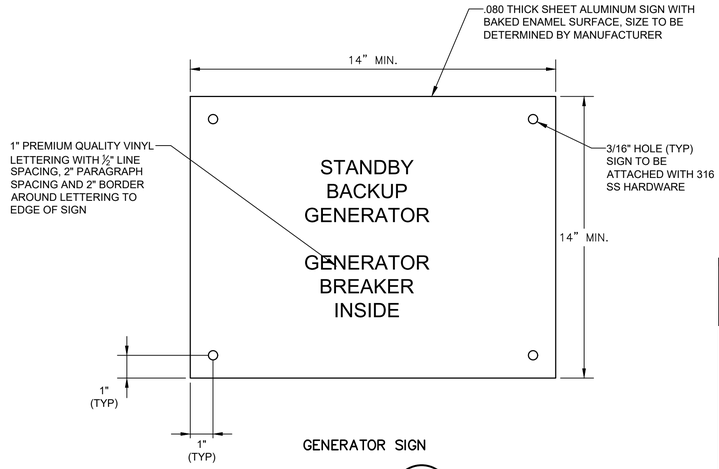


VIBRATION ISOLATOR
TOP VIEW

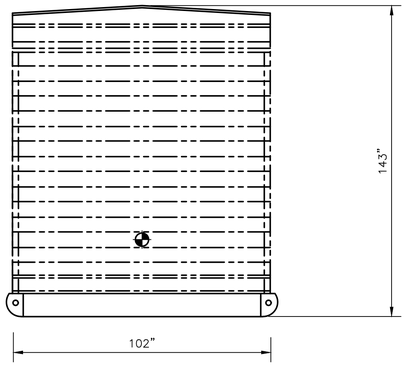


VIBRATION ISOLATOR
SIDE VIEW

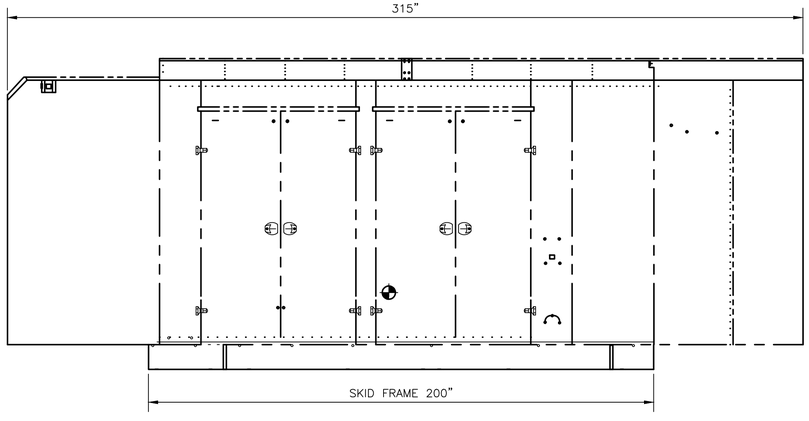
ANCHORING DETAIL FOR GENERATOR SKID
DETAIL 2
N.T.S.



GENERATOR SIGN
DETAIL 3
NTS



ENCLOSURE END VIEW
ELEVATION 1
N.T.S.



ENCLOSURE SIDE VIEW
ELEVATION 2
N.T.S.

DWG: E-25

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VERIFICATION OF PRIVATE UTILITY LINES

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NO.	DATE	REVISIONS	APP.

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TEXAS P.E. NO. 68078
JULY 2025
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KGI Kalluri Group, Inc.
TBPE Registration No. F-665
16300 Katy Freeway, Suite 172
Houston, Texas 77094
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QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE:
JOB NO:
DGN BY: RHW
DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

ELECTRICAL
DETAILS
SHEET 7

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

PRIMARY FLOW ELEMENTS

	MAGNETIC FLOW METER
	ULTRASONIC DOPPLER FLOW METER
	ULTRASONIC TIME TRANSIT FLOW METER
	VORTEX FLOW METER
	VENTURI TUBE
	TURBINE OR PROPELLER TYPE METER
	ROTAMETER
	PITOT TUBE
	WEIR FLOW METER
	PARSHALL FLUME OR TRAPEZOIDAL FLUME
	ORIFICE PLATE
	THERMAL MASS FLOWMETER

PRIMARY LEVEL ELEMENTS

	ULTRASONIC LEVEL TRANSDUCER
	RADAR LEVEL TRANSDUCER
	PRIMARY ELEMENT PRESSURE PROBE LEVEL TRANSMITTER
	BUBBLER LEVEL TUBE ELEMENT
	CONDUCTIVE LEVEL PROBE
	FLOAT SWITCH

VALVES

	VALVE - OTHER IN-LINE TYPE NOT OTHERWISE IDENTIFIED
	THREE-WAY VALVE
	BALL VALVE
	GLOBE VALVE
	PINCH VALVE
	GATE VALVE
	NEEDLE VALVE
	DIAPHRAGM VALVE
	BUTTERFLY VALVE
	CHECK VALVE WITH FLOW DIRECTION
	PLUG VALVE
	PRESSURE-REDUCING REGULATOR INTERNAL PRESSURE TAP
	BACK PRESSURE REGULATOR INTERNAL PRESSURE TAP
	PRESSURE-REDUCING REGULATOR EXTERNAL PRESSURE TAP
	BACK PRESSURE REGULATOR EXTERNAL PRESSURE TAP

VALVES

S	SOLENOID ACTUATED VALVE
X	"X" = P AIR CYLINDER; O OIL CYLINDER; H HYDRAULIC CYLINDER; E ELECTRIC MOTOR; S SOLENOID VALVE
OR NO SYMBOL	MANUAL VALVE

MISC PROCESS SYMBOLS

	ANNULAR TYPE SEAL
	CHEMICAL INJECTION POINT
	STRAINER
	DRAIN
	NORMAL OPERATING LEVEL
UV	UV CHAMBER
	FLOW STRAIGHTENER
	LOAD CELL
	SPRAY NOZZLE
	BLIND FLANGE
	FLANGE
	DIAPHRAGM SEAL
	PRESSURE RELIEF (OUT)
	VACUUM RELIEF (IN)

GATES

	SLUICE/SLIDE GATE
	FLOW CONTROL GATE

MOTORS

M	VARIABLE SPEED MOTOR
M	CONSTANT SPEED MOTOR

PUMPS, BLOWERS AND MISC EQUIPMENT

	CENTRIFUGAL BLOWER
	CENTRIFUGAL PUMP
	DIAPHRAGM PUMP AND MOTOR
	PROGRESSIVE CAVITY PUMP
	SUBMERSIBLE PUMP
	POSITIVE DISPLACEMENT BLOWER

PUMPS, BLOWERS AND MISC EQUIPMENT

	MIXER/FLOCCULATOR/AERATOR
	VERTICAL PUMP-1 USED WHEN DISCHARGE LINE IS IN WETWELL
	VERTICAL PUMP-2 USED WHEN DISCHARGE LINE IS EXPOSED.
	VERTICAL PUMP SHAFT USED WHEN INTAKE OF PUMP IS ENCASED.
	SUBMERSIBLE MIXER
	COMPRESSOR
	HEAT EXCHANGER
	FEED PUMP
	GRINDER/MACERATOR
	METERING PUMP
	PLUNGER PUMP
	PERISTALTIC METERING PUMP
	CENTRIFUGE
	PULSATION DAMPENER
	TURBO BLOWER

PUMPS, BLOWERS AND MISC EQUIPMENT

	ROTARY SCREEN

CONTROL ENCLOSURE, INSTRUMENTS AND SCADA

XXX / P AAA YY / BBB CCC D / ZZZ	DIGITAL/ANALOG INSTRUMENT AAA ISA TAG (REFER TO TABLE) BBB LOOP NUMBER CCC LOOP NUMBER SUB D DIVISION NUMBER P POWER REQUIREMENT XXX DESCRIPTION (USED ON PANEL INSTRUMENTS) YY CHEMICAL ZZZ LOCATION DIGITAL/ANALOG INSTRUMENT -LOCATED IN THE FIELD -NOT INSIDE OF PANEL -VISIBLE AT FIELD LOCATION -NORMALLY OPERATOR ACCESSIBLE
XXX / P AAA YY / BBB CCC D / ZZZ	DIGITAL/ANALOG INSTRUMENT -LOCATED ON PANEL -VISIBLE TO OPERATOR -NORMALLY OPERATOR ACCESSIBLE
XXX / P AAA YY / 666 CCC D / ZZZ	DIGITAL/ANALOG INSTRUMENT -LOCATED INSIDE PANEL -NOT VISIBLE TO OPERATOR -NORMALLY NOT ACCESSIBLE
XXX / AAA / BBB CCC	DISPLAY (INDICATION/CONTROLLER) AAA ISA TAG (REFER TO TABLE) BBB LOOP NUMBER CCC LOOP NUMBER SUB XXX DESCRIPTION DISPLAY (INDICATION/CONTROLLER) -LOCATED IN THE FIELD -NOT INSIDE OF PANEL -VISIBLE AT FIELD LOCATION -NORMALLY OPERATOR ACCESSIBLE
XXX / AAA / BBB CCC	DISPLAY (INDICATION/CONTROLLER) -LOCATED ON PANEL -VISIBLE TO OPERATOR -NORMALLY OPERATOR ACCESSIBLE
XXX / AAA / BBB CCC	DISPLAY (INDICATION/CONTROLLER) -LOCATED INSIDE PANEL -NOT VISIBLE TO OPERATOR -NORMALLY NOT ACCESSIBLE
-	INTERLOCKING RELAY

CONTROL ENCLOSURE AND SCADA

	DIGITAL INPUT
	DIGITAL OUTPUT
	ANALOG INPUT
	ANALOG OUTPUT
	SURGE SUPPRESSOR
	OPTO ISOLATOR
/	SIGNAL CONVERTER/ ISOLATOR */* - (INPUT/OUTPUT) *DEFINED AS FOLLOWS: E - VOLTAGE I - CURRENT P - PNEUMATIC PD- PULSE DURATION H - HYDRAULIC O - ELECTROMAGNETIC, SONIC R - RESISTANCE (ELECTRIC)

CONTROL ENCLOSURE, INSTRUMENTS AND SCADA

F(X)

PLC/RTU LOGIC

FUNCTION SYMBOLS AND ABBREVIATIONS

k	PROPORTIONAL GAIN OR ATTENUATE (INPUT:OUTPUT)
- k	REVERSE PROPORTIONAL GAIN OR ATTENUATE (INPUT:OUTPUT)
Σ	SUMMING
Σ/n	AVERAGING
Δ	SUBTRACTING
√	EXTRACT SQUARE ROOT
÷	DIVIDE
X	MULTIPLY
S	INTEGRATE
+	BIAS POSITIVE
-	BIAS NEGATIVE
F(X)	NONLINEAR OR UNSPECIFIED FUNCTION
>	HIGH SELECT
<	LOW SELECT
▶	HIGH LIMIT
◀	LOW LIMIT

INSTRUMENT (COMMON HOUSING)	INSTRUMENT (SEPERATOR HOUSING)	INSTRUMENT (PART OF MAJOR EQUIPMENT)

GENERAL NOTES:

1. THIS IS A GENERAL LEGEND SHEET, SOME SYMBOLS AND ABBREVIATIONS MAY NOT APPLY TO THIS SPECIFIC PROJECT.
2. THIS LEGEND APPLIES TO INSTRUMENTATION DIAGRAMS ONLY AND MAY DIFFER FROM LEGENDS FOR OTHER SHEETS.
3. IN GENERAL THIS LEGEND SHEET AND THE INSTRUMENTATION DIAGRAMS ARE BASED ON INTERNATIONAL SOCIETY OF AUTOMATION, STANDARDS FOR PRACTICES FOR INSTRUMENTATION, STANDARD S5.1 SOME MODIFICATIONS, ADDITIONS AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE THE PROJECT REQUIREMENTS.
4. SOME PROCESS ITEMS, SUCH AS EQUIPMENT SOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION AND CONTROL FUNCTIONS ARE NOT SHOWN ON THE INSTRUMENTATION SHEETS.
5. SEE ELECTRICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS FOR EQUIPMENT NOT SHOWN OR NOT PROVIDED BY THE INSTRUMENTATION SUPPLIER.
6. IN THE EVENT OF DISCREPANCY BETWEEN THE PROCESS & INSTRUMENTATION DIAGRAMS AND THE LOOP DIAGRAMS, THE INFORMATION FROM THE LOOP DIAGRAMS SHALL BE USED.

HAND SWITCH ABBREVIATIONS

HOA	HAND/OFF/AUTO
HOR	HAND/OFF/REMOTE
LOC	LOCAL/OFF/COMPUTER
LOR	LOCAL/OFF/REMOTE
LOS	LOCKOUT STOP
OSC	OPEN/STOP/CLOSE
RSL	RAISE/STOP/LOWER
L/C	LOCAL/COMPUTER
L/R	LOCAL/REMOTE
O/C	OPEN/CLOSE
S/S	START/STOP
A/M	AUTO/MANUAL
H/C	HAND/COMPUTER
PB	PUSHBUTTON

DWG: I–01

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
LEGENDS & SYMBOLS
SHEET 1

WBS #: R-000267-127A-3

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DRAWING SCALE: AS SHOWN HORIZ: VERT:

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

LINE SYMBOLS

	MAJOR PROCESS LINE
	MINOR PROCESS LINE
	FUTURE PROCESS LINE
	EXISTING PROCESS LINE
	HARDWIRED SIGNAL
	SOFT LINK
— L — L —	HYDRAULIC LINK
— // — // —	PNEUMATIC LINK
— X — X —	CAPILLARY TUBE OR FILLED SYSTEM SIGNAL
	ELECTROMAGNET OR SONIC SIGNAL (GUIDED)
DESCRIPTION X SHEET# Y	(USED WHEN REFERRING TO A SHEET IN THE DESIGN SET) DESCRIPTION - WHERE FLOW IS GOING SHEET# - WHAT SHEET PROCESS CONTINUES ON X - USED WHEN TWO OR MORE ARROWS ARE REFERING TO THE SAME SHEET. Y - USED WHEN TWO OR MORE ARROWS ARE REFERRING TO THE SAME SHEET.
DESCRIPTION	(USED WHEN REFERRING TO A SHEET NOT IN THE DESIGN SET) DESCRIPTION - WHERE FLOW IS GOING
CAT5e — CAT5e	CAT-5e ETHERNET CABLE
CAT6 — CAT6	CAT-6 ETHERNET CABLE
MB+ — MB+	MODBUS PLUS CABLE
RS-485	RS-485 CABLE
RS-232 — RS-232	RS-232 CABLE
POE — POE	POWER OVER ETHERNET CABLE
T1 — T1	T1 FIBER CONNECTION
FO — FO	NON-SPECIFIC FIBER OPTIC CABLE
100 — 100	FIBER 100BASE-FX
1000 — 1000	FIBER 1000BASE-FX
	SIGNAL CROSSING
	PROCESS LINE CROSSING
	PROCESS LINE/ HARDWIRE SIGNAL CROSSING

EQUIPMENT/LOOP TAGGING

(X)	EQUIPMENT TAG USED TO IDENTIFY NON-INSTRUMENT EQUIPMENT
X	LOOP TAG USED TO TIE THE PROCESS FLOW DIAGRAM TO A LOOP DIAGRAM

STANDARD VALVE AND PIPING USAGE

PDIT 1	BLOCK/BLEED VALVE ARRANGEMENT
PI 1	INSTRUMENTS WITH VALVE ONLY
PI 1	INSTRUMENTS WITH DIAPHRAGM SEAL
PI 1	INSTRUMENTS WITH ANNULAR SEAL

PANEL DETAIL SYMBOLS

RUN	INDICATING LIGHT -R RED (ACTIVE EQUIPMENT) -G GREEN (EQUIPMENT OFF) -W WHITE (POWER) -B BLUE (CONDITION BACKWASH IN PROGRESS) -A AMBER (ALARM CONDITION)
H/O/A	SWITCH -L/R (LOCAL - REMOTE) -L/O/A (LOCAL - OFF - AUTO) -L/O/R (LOCAL - OFF - REMOTE) -H/O/A (HAND - OFF - AUTO) -H/O/R (HAND - OFF - REMOTE)
START	PUSHBUTTON
	HORN
	BEACON
OIT	OPERATOR INTERFACE TERMINAL

SECURITY SYSTEM SYMBOLS

CCTV	CLOSED CIRCUIT TELEVISION CAMERA
PTZ	PAN, TILT, ZOOM CAMERA

GENERAL ABBREVIATIONS

AI	ANALOG INPUT
AL	ALARM PILOT LIGHT
AO	ANALOG OUTPUT
AS	AIR SUPPLY
ASD	ADJUSTABLE SPEED DRIVE
ASP	APPLICATION SERVICE PROVIDER
BFV	BUTTERFLY VALVE
CCTV	CLOSED CIRCUIT TELEVISION
CH4	METHANE
CL2	CHLORINE
COND	CONDUCTIVITY
COMP	COMPUTER
CP	CONTROL PANEL
CPU	CENTRAL PROCESSING UNIT
CRC	CONTROL ROOM CONSOLE
CTU	CENTRAL TELEMETRY UNIT
DCU	DISTRIBUTED CONTROL UNIT
DI	DIGITAL OR DISCRETE INPUT
DO	DISSOLVED OXYGEN OR DIGITAL OUTPUT
DPU	DISTRIBUTED PROCESSING UNIT
EPP	ETHERNET PATCH PANEL
ES	EMERGENCY STOP
ESW	ETHERNET SWITCH
ETM	ELAPSED TIME METER
FC	FAIL CLOSED
FCP	FIELD CONTROL PANEL
FCS	FILTER CONTROL STATION
FCV	FLOW CONTROL VALVE
FLP	FAIL LAST POSITION
FO	FAIL OPEN
FOPP	FIBER OPTIC PATCH PANEL
FPR	FEEDER PROTECTION RELAY
H2S	HYDROGEN SULFIDE
HMI	HUMAN MACHINE INTERFACE
JB	JUNCTION BOX
IO	INPUT/OUTPUT
IR	INFARED
LAS	LIQUID AMMONIA SULFATE
LCP	LOCAL CONTROL PANEL
LCS	LOCAL CONTROL STATION
LT	LEVEL TRANSMITTER
LPU	LOCAL PROCESSING UNIT
LTS	LOCAL TERMINAL SYSTEM
MC	MOTOR CONTROLLER
NAOCLS	ODIUM HYPOCHLORIDE
NC	NORMALLY CLOSED
NH3	AMMONIA
NIM	NETWORK INTERFACE MODULE
NO	NORMALLY OPEN
MCC	MOTOR CONTROL CENTER
MM	MULTI MODE FIBER OPTIC CABLE
MPR	MOTOR PROTECTION RELAY
OIT	OPERATIONS INTERFACE TERMINAL
OL	OVERLOAD
OWS	OPERATOR WORKSTATION
PB	PUSH BUTTON
PCSI	PROCESS CONTROL SYSTEM INTEGRATOR
pH	HYDROGEN ION
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMCS	PROCESS MONITORING CONTROL SYSTEM
POLY	POLYMER
PQM	POWER QUALITY METER
PS	POWER SUPPLY
PSU	POWER SUPPLY UNIT
PV	PINCH VALVE
RBC	REMOTE BASE CONTROLLER
RIO	REMOTE INPUT OUTPUT
RTU	REMOTE TERMINAL UNIT
SCADA	SUPERVISORY CONTROL AND DATA AQUISITION
SM	SINGLE MODE FIBER OPTIC CABLE
SO2	SULFUR DIOXIDE
SOL	SOLENOID
SPD	SURGE PROTECTION DEVICE
UPS	UNINTERRUPTIBLE POWER SUPPLY
TC	TERMINATION CABINET
TURB	TURBIDITY
VIB	VIBRATION
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE

MEANINGS OF IDENTIFICATION LETTERS

THIS TABLE APPLIES ONLY TO THE FUNCTIONAL IDENTIFICATION OF INSTRUMENTS.

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS/ANALYTICAL		ALARM		
B	BURNER, COMBUSTION			CLOSE, STOP, DECREASE (1)	
C	CONDUCTIVITY			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL		OPEN START, INCREASE (1)	
E	VOLTAGE (EMF)		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			FAIL (1)
G	GAUGING (DIMENSIONAL)		GLASS VIEWING DEVICE		
H	HAND				HIGH OR OPEN
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR TIME SCHEDULE	TIME RATE OR CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW OR CLOSED
M	MOISTURE, HUMIDITY, MOTOR, MOTION	MOMENTARY		MOTOR (1)	MIDDLE OR INTERMEDIATE
N	USERS CHOICE		USER'S CHOICE		ON OR OPERATE (1)
O	USER'S CHOICE		ORIFICE (RESTRICTION)		OVERLOAD (1)
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)	PUMP (1)	
Q	QUANTITY (2)	INTEGRATE OR TOTALIZE			
R	RADIATION		RECORD		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (2)		MULTIFUNCTION (2)	MULTIFUNCTION (2)	MULTIFUNCTION (2)
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		UNCLASSIFIED (2)
X	UNCLASSIFIED (2)	X AXIS	UNCLASSIFIED (2)	UNCLASSIFIED (2)	UNCLASSIFIED (2)
Y	EVENT, STATE, PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

COMMON HMI/INSTRUMENT ISA TAGGING

ABBREVIATION	MEANING
AIT	ANALYTICAL INDICATING TRANSMITTER
AE	ANALYTICAL ELEMENT
AI	CHEMICAL RESIDUAL/INDICATION
CT	CYCLE TIMER
FIT	FLOW INDICATING TRANSMITTER
FE	FLOW ELEMENT
FI	FLOW INDICATION
HS	HAND SWITCH
JAL	POWER ALARM LOW
II	CURRENT INDICATION
LIT	LEVEL INDICATING TRANSMITTER
LE	LEVEL ELEMENT
LI	LEVEL INDICATION
LSH	LEVEL SWITCH HIGH
LSL	LEVEL SWITCH LOW
LAL	LEVEL ALARM LOW
LAH	LEVEL ALARM HIGH
PIT	PRESSURE INDICATING TRANSMITTER
PE	PRESSURE ELEMENT
PI	PRESSURE INDICATION
PSH	PRESSURE SWITCH HIGH
PSL	PRESSURE SWITCH LOW
SI	SPEED INDICATION
SIC	SPEED INDICATING CONTROLLER
TIT	TEMPERATURE INDICATING TRANSMITTER
TE	TEMPERATURE ELEMENT
TI	TEMPERATURE INDICATION
TSH	TEMPERATURE SWITCH HIGH
WIT	WEIGHT INDICATING TRANSMITTER
WE	WEIGHT ELEMENT
WI	WEIGHT INDICATION
XA	FAULT ANNUNCIATION
YL	MISC. EVENT LIGHT (IN REMOTE)

COMMON HMI/INSTRUMENT ISA TAGGING

ABBREVIATION	MEANING
ZCH	OPEN GATE/VALVE
ZCL	CLOSE GATE/VALVE
ZSH	POSITION SWITCH HIGH
ZSL	POSITION SWITCH LOW
ZLH	VALVE/GATE OPEN
ZLL	VALVE/GATE CLOSED
ZIT	POSITION INDICATING TRANSMITTER

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
LEGENDS & SYMBOLS
SHEET 2

WBS #: R-000267-127A-3

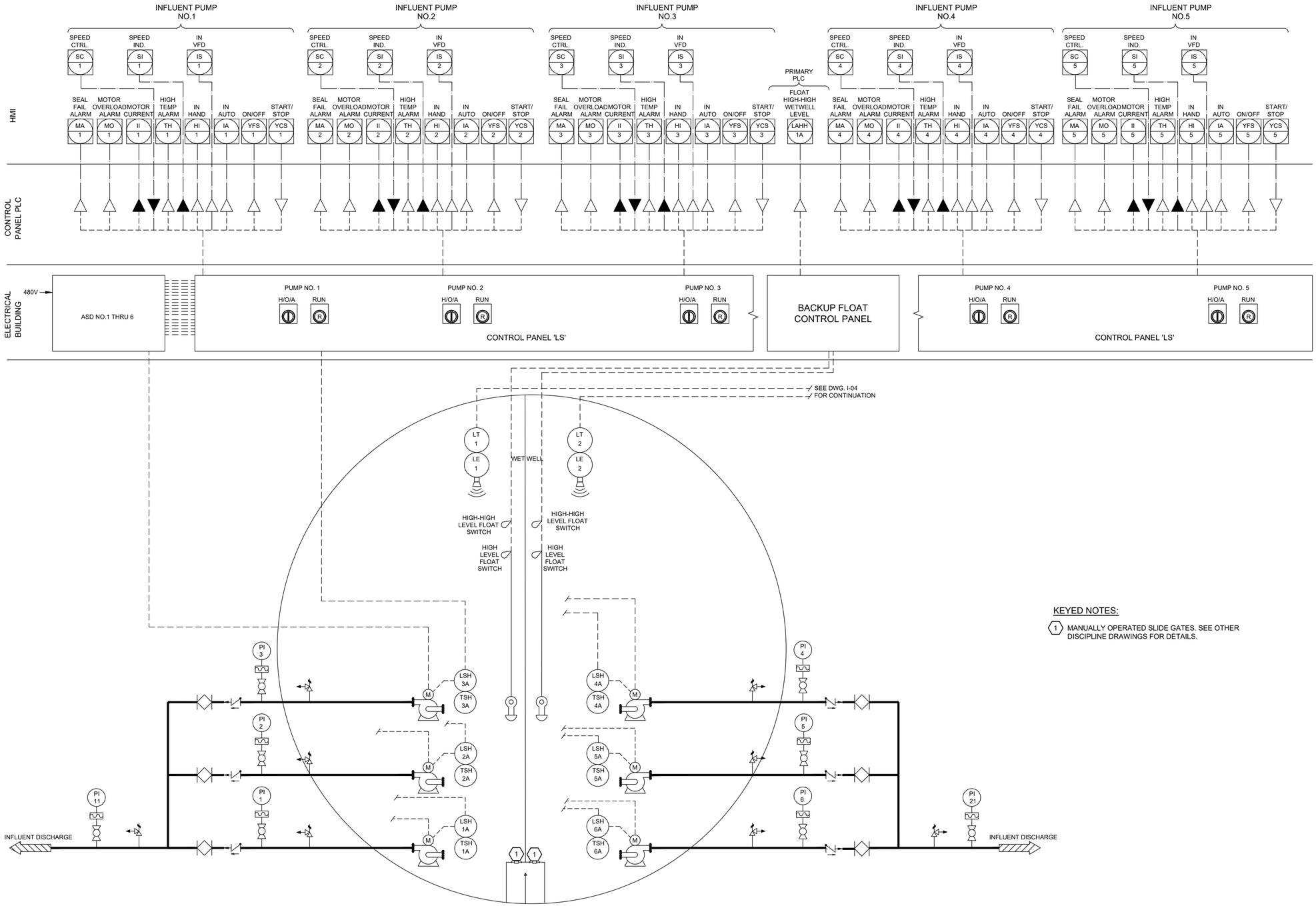
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DWG: I-02

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



KEYED NOTES:

1. MANUALLY OPERATED SLIDE GATES. SEE OTHER DISCIPLINE DRAWINGS FOR DETAILS.

DWG: I–03

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INSTRUMENTATION
PROCESS & INSTRUMENTATION
DIAGRAM 1

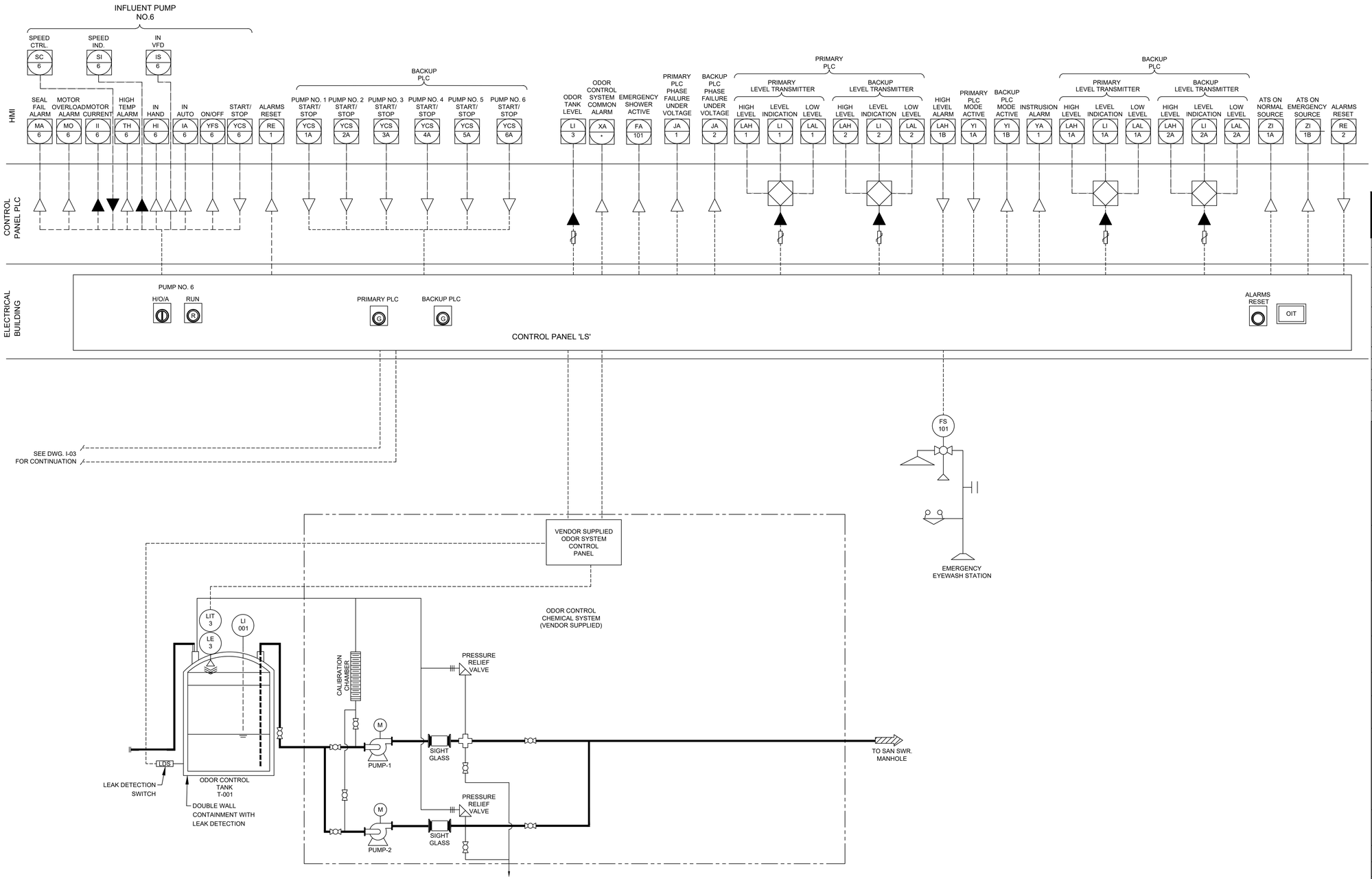
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Date:

Approved for AT&T Texas / SWBT underground conduit facilities only.
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NO.	DATE	REVISIONS	APP.

GENERAL NOTES:

A. CONTRACTOR TO COORDINATE REQUIREMENTS WITH APPROVED SHOP DRAWINGS.

B. REFER TO DIV 11 TEXAS PIPING WORKS FOR MORE INFORMATION ON THE ODOR CONTROL SYSTEM & ALL ASSOCIATED PIPING, VALVES, AND FITTINGS.

C. CONTRACTOR TO SEE APPROVED SHOP DRAWING FOR ADDITIONAL INFORMATION ON VENDOR SUPPLIED EQUIPMENTS.

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TEXAS P.E. NO. 83028
DATE 07/28/2025
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Kalluri Group, Inc.
TBPE Registration No. F-665
16300 Katy Freeway, Suite 172
Houston, Texas 77094
Phone: (713)-365-9288

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
JOB NO: _____ DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PROCESS & INSTRUMENTATION
DIAGRAM 2

WBS #: R-000267-127A-3

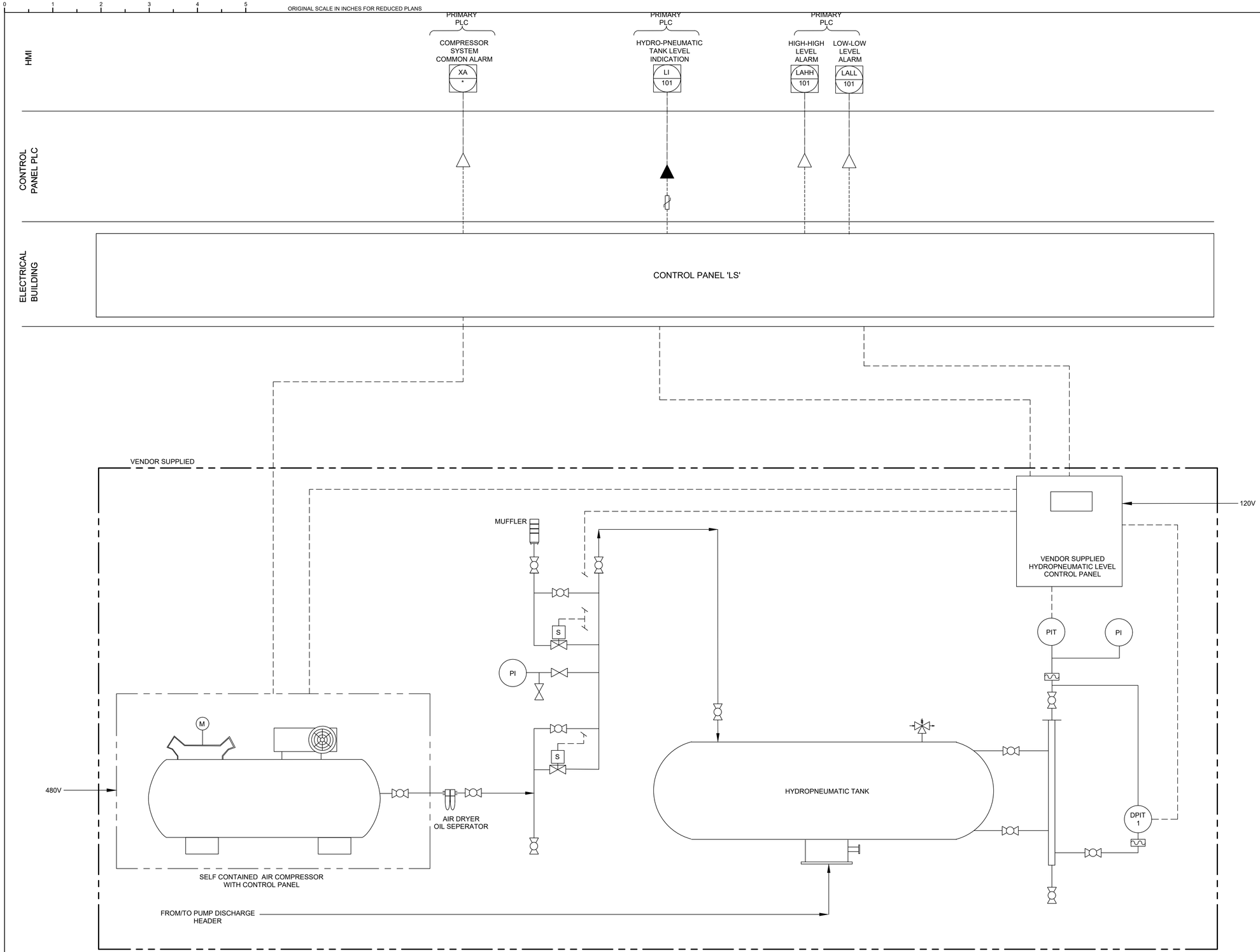
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

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DWG: I-04

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Instrumentation\I-04 INSTRUMENTATION PROCESS & INSTRUMENTATION DIAGRAM 2.dwg

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



GENERAL NOTES:

A. CONTRACTOR TO COORDINATE REQUIREMENTS WITH APPROVED SHOP DRAWINGS.

B. REFER TO DIV 11 SPECIFICATION FOR MORE INFORMATION ON THE HYDRO-PNEUMATIC TANK, AIR COMPRESSOR & ALL ASSOCIATED PIPING, VALVES, AND FITTINGS.

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PROCESS & INSTRUMENTATION
DIAGRAM 3

WBS #: R-000267-127A-3

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DWG: I–05

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

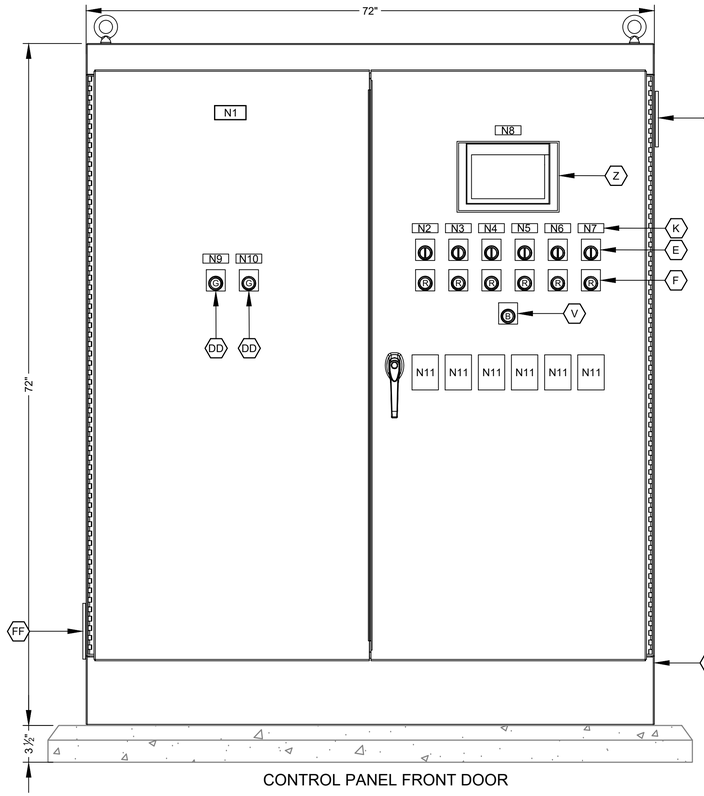
EQUIPMENT AND DEVICE SCHEDULE

ITEM	QUANTITY	DESCRIPTION
A	2	SINGLE CHANNEL INTRINSICALLY SAFE RELAY
B	2	ANALOG SIGNAL ISOLATOR
C	6	PUMP PROTECTION MODULE
D	1	CISCO MERAKI CELLULAR GATEWAY
E	6	HAND-OFF-AUTO SWITCH, 3 POSITION, HEAVY-DUTY OIL TIGHT WITH 2 SETS OF CONTACT BLOCKS (PUMP CONTROL)
F	6	INDICATING LIGHT, HEAVY DUTY, OIL TIGHT, RED, 24VDC, LED, WITH "RUN" LEGEND
G	1	6 OUTLET POWER STRIP
H	1	SWITCH FOR CABINET LIGHT, 120V, 20A, SPST
I	2	DUPLEX RECEPTACLE, 120V, 20A, 2 WIRE, GROUNDED, GFCI TYPE
J	1	24" LED STRIP LIGHT 120V SUITABLE FOR ZERO DEGREE OPERATION
K	*	NAMEPLATES, SEE SPECIFICATIONS (SEE NAMEPLATE SCHEDULE BELOW)
L	2	PROGRAMMABLE LOGIC CONTROLLER WITH EXPANSION UNIT
M	*	CONTROL RELAY 24VDC RELAY WITH THREE FORM C CONTACTS AND 11 PIN SOCKET BASE
N	1	FLASHER RELAY
O	1	1 POLE FUSE HOLDER
	1	3 AMP FUSE
P	1	NEMA 12 GASKETED STEEL ENCLOSURES 72"H x 20"D x WIDTH AS REQUIRED
Q	*	TERMINAL BLOCK
R	*	WIRE DUCT 3" WIDE x 3" DEEP MINIMUM
S	1	GROUND BUS BAR
T	1	ETHERNET SWITCH
U	1	FAN THERMOSTAT
V	1	PUSHBUTTON, BLACK WITH RESET LEGEND
W	1	NOT USED
X	*	FUSED TERMINAL BLOCKS
Y		POWER SURGE PROTECTOR - CONTROL POWER
Z	1	PROGRAMMING SCREEN (HMI)
AA		NOT USED
BB	1	120VAC-24VDC POWER SUPPLY, 5A
CC		NOT USED
DD	2	INDICATING LIGHT, HEAVY DUTY, OILTIGHT, GREEN, 24VDC, LED WITH "BACKUP PLC" & "PRIMARY PLC" LEGEND
EE	4	ANALOG I/O SURGE SUPRESSOR
FF	1	FAN
	1	EXHAUST GRILL

* AS SCHEDULED

NAMEPLATE SCHEDULE

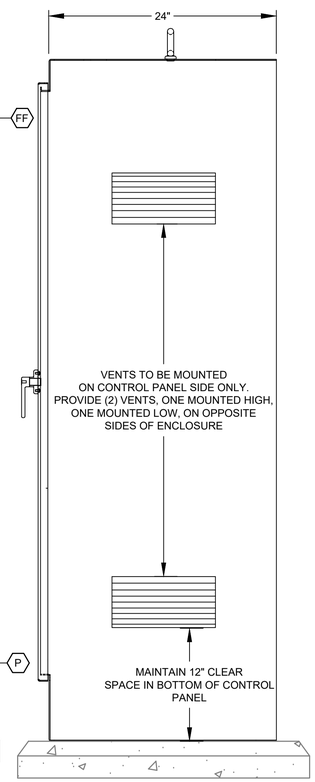
N1	SAGEMONT LIFT STATION	N9	PRIMARY PLC
N2	PUMP NO.1	N10	BACKUP PLC
N3	PUMP NO.2	N11	MOTOR DATA
N4	PUMP NO.3		HORSEPOWER (OUTPUT) ----------
N5	PUMP NO.4		RPM AT FULL LOAD ----------
N6	PUMP NO.5		TIME RATING ----------
N7	PUMP NO.6		FREQUENCY ----------
N8	PROGRAMMING SCREEN		NUMBER OF PHASES ----------
			MODEL NUMBER ----------
			RATED VOLTAGE ----------
			SERVICE FACTOR ----------
			FULL LOAD AMPS ----------
			INSULATION CLASS ----------
			NEMA DESIGN LETTER ----------
			DATE OF MANUFACTURE ----------
			THERMO PROTECTION (IF REQUIRED)--------
			MOISTURE PROTECTION (IF REQUIRED)--------



CONTROL PANEL FRONT DOOR

ELEVATION

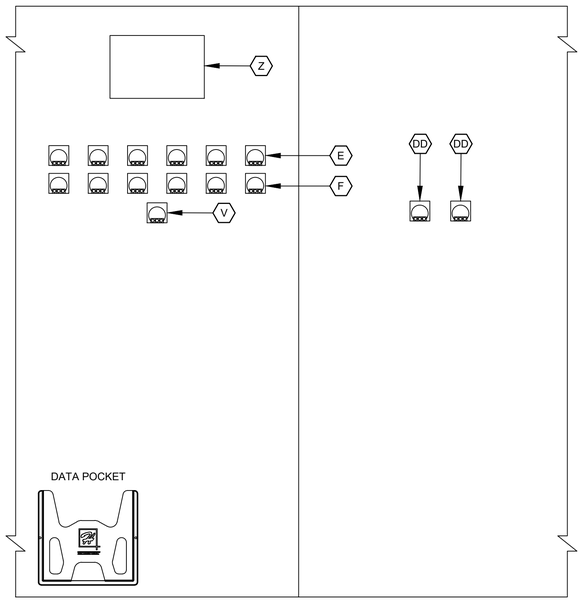
NTS



CONTROL PANEL SIDE VIEW

ELEVATION

NTS



CONTROL PANEL BACK DOOR

ELEVATION

NTS

GENERAL NOTES:

A. NAMEPLATES SHALL BE MOUNTED TO PANELS USING STAINLESS STEEL HARDWARE.

B. CONTROL PANEL SHALL BE UL698A LISTED ENCLOSED INDUSTRIAL CONTROL PANEL.

C. REFER TO SPECIFICATION 13325 & 13327 FOR ADDITIONAL INFORMATION.

DWG: I–06

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
CONTROL PANEL EQUIPMENT
LAYOUT & SCHEDULE

WBS #: R-000267-127A-3

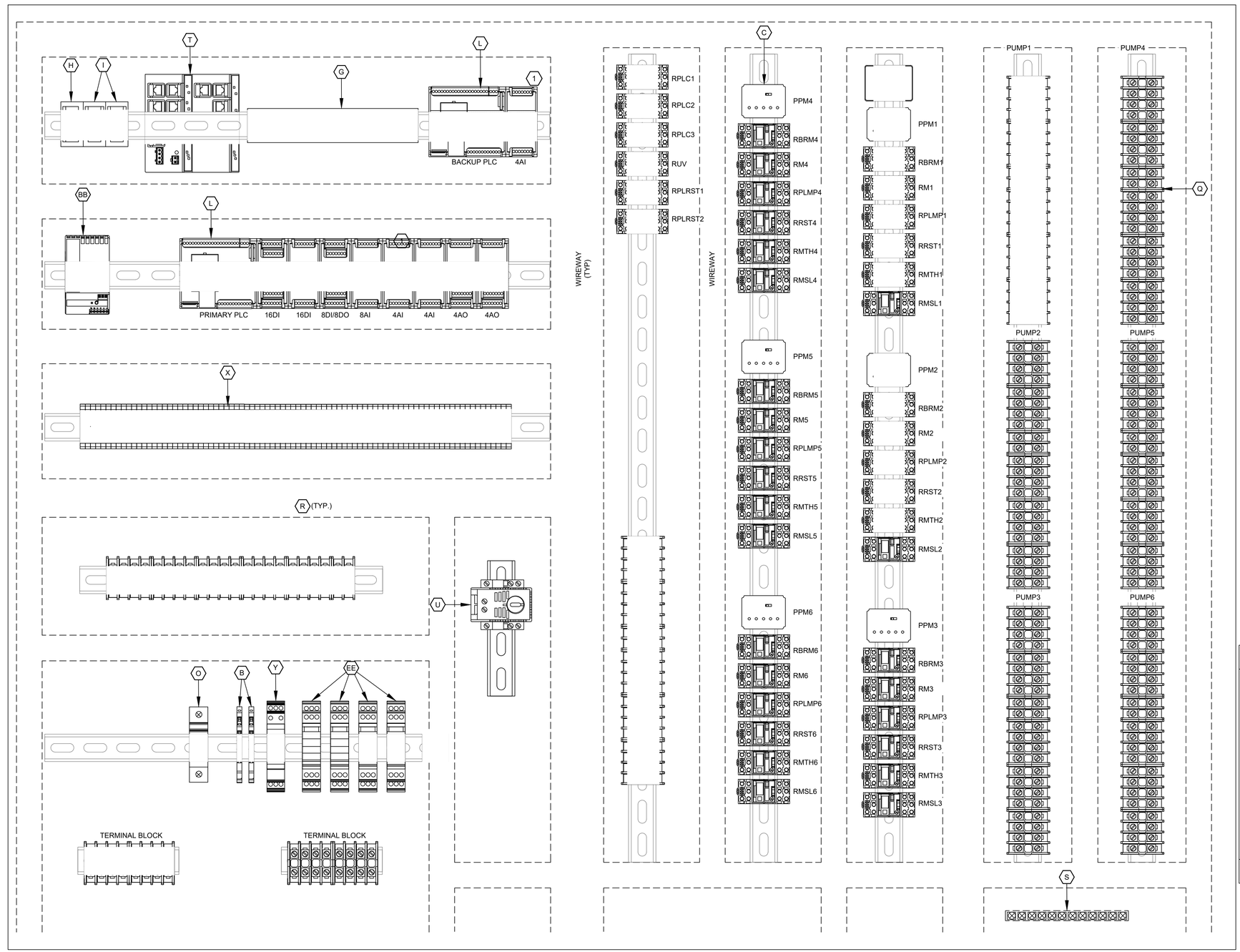
CITY OF HOUSTON
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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS





CONTROL PANEL INTERIOR

ELEVATION

NTS

GENERAL NOTES:

A. CONTROL PANEL SHALL BE UL508A LISTED ENCLOSED INDUSTRIAL CONTROL PANEL. PANEL SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NEC AND UL STANDARDS.

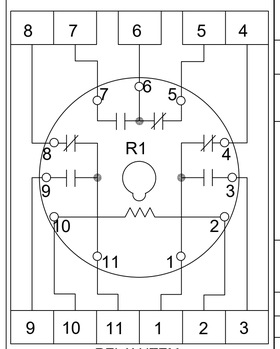
B. REFER TO SPECIFICATION 13325 & 13327 FOR ADDITIONAL INFORMATION.

C. LAYOUT SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL LAYOUT AND QUANTITIES.

KEYED NOTES:

(1) CONTRACTOR SHALL SEE SPECIFICATION 13405 "INPUT-OUTPUT LIST" FOR DETERMINING THE I/O CARDS REQUIRED TO PROVIDE ALL THE I/O POINTS ALONG WITH THE SPARES FOR BOTH THE PRIMARY & BACKUP PLC. THE DRAWING PRESENTED HERE MAY NOT ACCURATELY DEPICT THE EXACT COUNT OF THE I/O CARDS REQUIRED.

LEGEND	
TAG	DESCRIPTION
PPM	PUMP PROTECTION MODULE
RBRM	BACKUP SYSTEM RUN RELAY
RM	PUMP RUN AUX RELAY
RPLMP	PLC RUN PUMP RELAY
RRST	PUMP RESET AUX RELAY
RMTH	MOTOR HIGH TEMPERATURE ALARM RELAY
RMSL	MOTOR SEAL LEAK ALARM RELAY
TDLP'X'F	TIME DELAY RELAY - FLOAT STAGGER START
RPLC	PLC MODE AUX RELAY
RUV	UNDER VOLTAGE RELAY
RPLRST	PLC RESET RELAY
RFS	PUMP RUN FLOAT SWITCH RELAY
ISO	INTRINSICALLY SAFE RELAY



RELAY ITEM

DETAIL

NTS

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
CONTROL PANEL INTERIOR
LAYOUT

WBS #: R-000267-127A-3

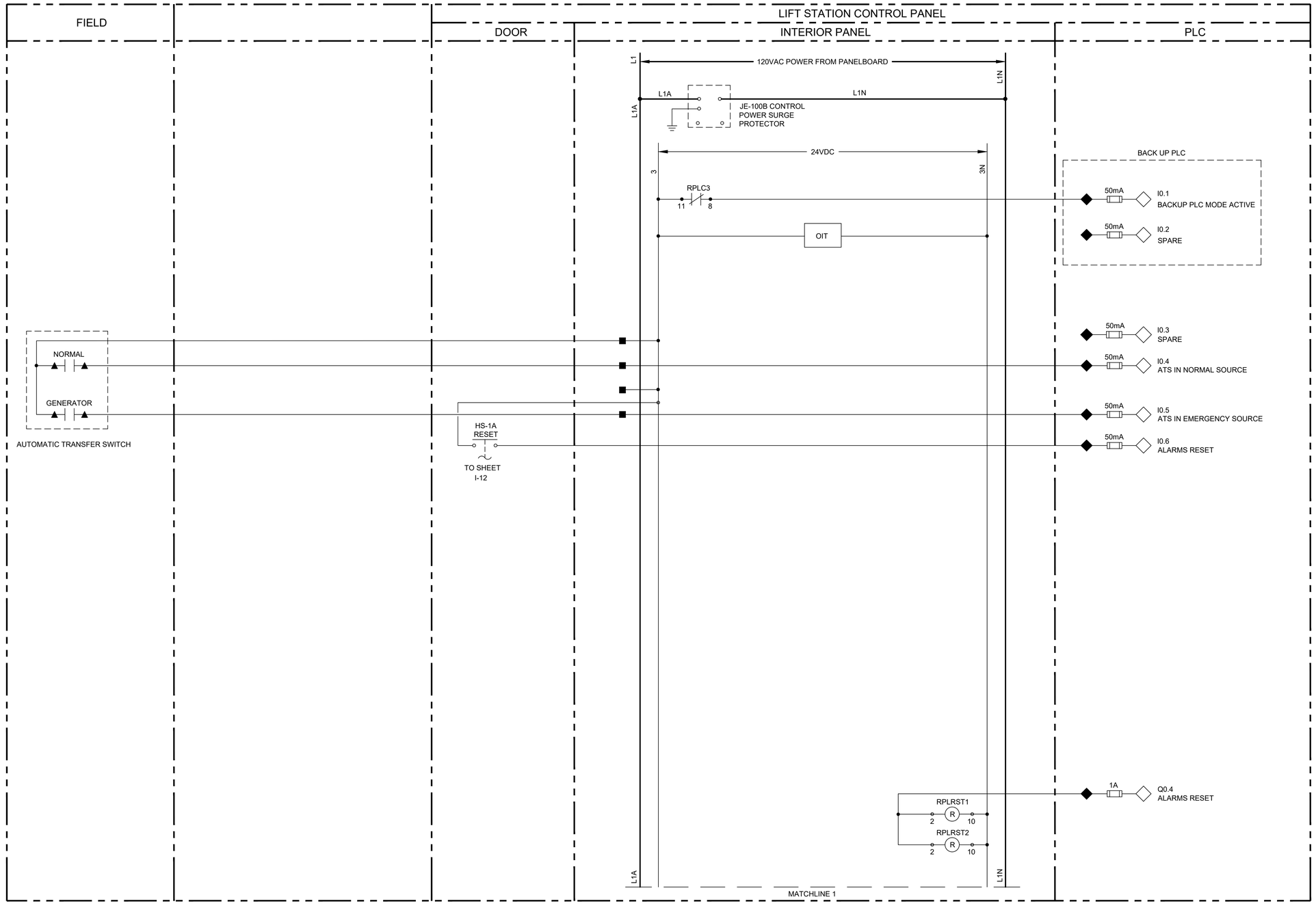
CITY OF HOUSTON
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DWG: I–07

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- ✱ DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

DWG: I–08

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CITY OF HOUSTON
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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
CONTROL PANEL CONTROL WIRING
DIAGRAM 1

WBS #: R-000267-127A-3

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HOUSTON PUBLIC WORKS

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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | MOTOR CONTROL CENTER | LIFT STATION CONTROL PANEL — DOOR | INTERIOR PANEL | PLC

MATCHLINE 1

120 VAC POWER

24VDC

L1A 3 3N L1N

BACK UP PLC

L+ — CPU POWER

M — CPU COMMON

1A — QO.0 PUMP NO.1 CALL TO RUN

1A — QO.1 PUMP NO.2 CALL TO RUN

1A — QO.2 PUMP NO.3 CALL TO RUN

1A — QO.3 PUMP NO.4 CALL TO RUN

1A — QO.4 PUMP NO.5 CALL TO RUN

1A — QO.5 PUMP NO.6 CALL TO RUN

1A — QO.6 SPARE

RBRM1 R 2 10

RBRM2 R 2 10

RBRM3 R 2 10

RBRM4 R 2 10

RBRM5 R 2 10

RBRM6 R 2 10

ANALOG ISOLATOR 1 2 3 4 5 6

50mA — AIO.0 PRIMARY WET WELL LEVEL TRANSMITTER

24- 24V-

ANALOG ISOLATOR 1 2 3 4 5 6

L+ — CPU POWER

M — CPU COMMON

50mA — AIO.2 BACKUP WET WELL LEVEL TRANSMITTER

L+ — CPU POWER

M — CPU COMMON

50mA — AIO.0 PRIMARY WET WELL LEVEL TRANSMITTER

50mA — AIO.2 BACKUP WET WELL LEVEL TRANSMITTER

ANALOG I/O SURGE SUPPRESSOR 1 2 7 8 11 12 5 6 — 24V+ — 24V+

EAST INSTRUMENTATION JUNCTION BOX

WEST INSTRUMENTATION JUNCTION BOX

PRIMARY RADAR LEVEL TRANSMITTER — LT-1

MFG. CABLE

BACKUP RADAR LEVEL TRANSMITTER — LT-2

L1A 3 3N L1N

MATCHLINE 2

LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- ★ DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
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- ◆ PLC INTERFACE TERMINAL

DWG: I–09

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INSTRUMENTATION
CONTROL PANEL CONTROL WIRING
DIAGRAM 2

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CITY OF HOUSTON
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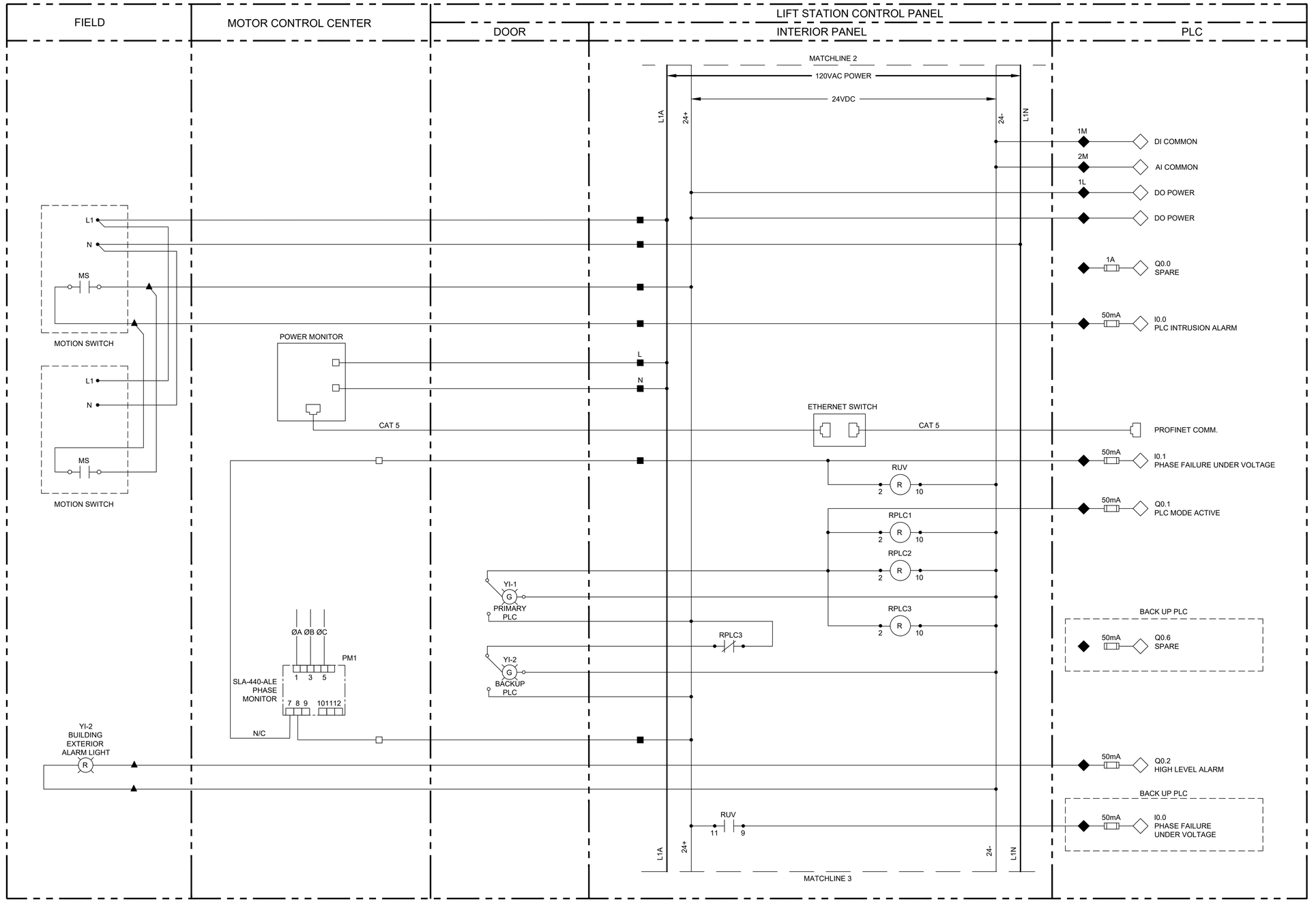
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0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



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- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

DWG: I–10

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INSTRUMENTATION
CONTROL PANEL CONTROL WIRING
DIAGRAM 3

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CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

0 1 2 3 4 5 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | TANK CONTROL PANEL | LIFT STATION CONTROL PANEL: DOOR, INTERIOR PANEL, PLC

MATCHLINE 3

120 VAC POWER

24VDC

24DC+ (L1A) — 24DC- (L1N)

DPT
HYDRO-PNEUMATIC TANK
DIFFERENTIAL PRESSURE
TRANSMITTER

ANALOG I/O
SURGE
SUPPRESSOR
(2, 1, 8, 7, 6, 11, 12, 5)

50mA
AIO.4
HYDRO-PNEUMATIC TANK
LEVEL TRANSMITTER
(DPT-1)

LIT-3
ODOR CONTROL TANK
LEVEL TRANSMITTER

ANALOG I/O
SURGE
SUPPRESSOR
(2, 1, 8, 7, 6, 11, 12, 5)

50mA
AIO.6
ODOR CONTROL TANK
LEVEL TRANSMITTER
LIT-3

HYDROPNEUMATIC TANK
CONTROL PANEL
(VENDOR SUPPLIED)

R1 (1, 3)
FROM TANK CONTROL PANEL
RELAY

R2 (1, 3)
FROM TANK CONTROL PANEL
RELAY

1A
I2.6
HYDROPNEUMATIC TANK
HIGH-HIGH LEVEL ALARM

1A
I2.7
HYDROPNEUMATIC TANK
LOW-LOW LEVEL ALARM

COMPRESSOR
CONTROL PANEL
(VENDOR SUPPLIED)

1A
I0.3
COMPRESSOR SYSTEM
COMMON ALARM

ODOR CONTROL TANK
CONTROL PANEL
(VENDOR SUPPLIED)

1A
I6.7
ODOR CONTROL TANK
COMMON ALARM

EMERGENCY
EYEWASH STATION
(VENDOR SUPPLIED)

1A
I6.6
EYEWASH/SHOWER
ACTIVE

L1A +24 ... -24 L1N

MATCHLINE 4

LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- ★ DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

DWG: I–11

C:\Users\Cad User 1\Kalluri Group, Inc\KGI - Documents\4285-QEL (Scott Street LS)\Drawings\Instrumentation\I-11 INSTRUMENTATION CONTROL PANEL CONTROL WIRING DIAGRAM 4.dwg

NOTICE:
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NO.	DATE	REVISIONS	APP.

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JULY 2025
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Houston, Texas 77094
Phone: (713)-365-9088

QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
JOB NO: _____ DWG BY: RHW

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
CONTROL PANEL CONTROL WIRING
DIAGRAM 4

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
CATEGORY NO. SHEET NO. OF
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | ASD W/BYPASS | LIFT STATION CONTROL PANEL: DOOR | INTERIOR PANEL | PLC

PUMP JUNCTION BOX
PUMP NO.1
4-20mA CURRENT TRANSDUCER
VFD NO. 1 POWER MODULE
INPUT REACTOR
FROM MCC
IE-1 MOTOR OVERLOAD RELAY (MOR)
CPT - 480-120VAC 1PH, 250VA MIN
HS-1B ASD BYPASS
ASD NO.1
COMMON
START/STOP
RUN PERMISSIVE
ASD RUNNING
ASD FAULT
80% SPEED SETPOINT
SPEED SETPOINT
SPEED FEEDBACK
HS-1 H-O-A
HS-1A RESET
TO SHEET I-13
BACKUP FLOAT CONTROL PANEL
LSH-1 SEAL LEAK SENSOR
TSH-1 MOTOR TEMP SWITCH
120VAC POWER
24 VDC POWER
PUMP PROTECTION MODULE*
*CONTACTS ARE SHOWN IN POWERED UP STATE

50mA AI0.8 PUMP NO.1 MOTOR CURRENT
1A Q0.7 PUMP NO.1 CALL TO RUN
50mA I3.1 PUMP NO.1 IN HAND
50mA I3.0 PUMP NO.1 IN AUTO
50mA I3.3 PUMP NO.1 MOTOR OVERLOAD ALARM
50mA I6.0 PUMP NO.1 IN ASD MODE
50mA AO0.0 PUMP NO.1 SPEED CONTROL
50mA AI2.0 PUMP NO.1 SPEED INDICATION
50mA I3.2 PUMP NO.1 SEAL FAILURE ALARM
50mA I1.0 PUMP NO.1 ON/OFF
50mA I1.1 PUMP NO.1 HIGH TEMPERATURE ALARM

LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- ▪ DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

KEYED NOTES:

1. MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PUMP NO.1 CONTROL WIRING DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN | HORIZ: | VERT:
CATEGORY NO. | SHEET NO. | OF
FOR CITY OF HOUSTON USE ONLY

DWG: I–12

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | ASD W/BYPASS | LIFT STATION CONTROL PANEL: DOOR | INTERIOR PANEL | PLC

PUMP JUNCTION BOX
4-20mA CURRENT TRANSDUCER
PUMP NO.2
T1 T2 T3 G
A B C CT
M2 VFD NO. 2 POWER MODULE INPUT REACTOR M1 MCP FROM MCC
M3
IE-2 MOTOR OVERLOAD RELAY (MOR) (1)
97 98 95 96
TDLP2
1A 1A CPT - 480-120VAC 1PH, 250VA MIN
X1-1 3A X2-1
TDLP2 (TD) CR1 (R)
HS-2B ASD BYPASS
XO OX
M1 M2 M3 CR1 M2 MOR 95 96
BACKUP FLOAT CONTROL PANEL
TDLP2F
ASD NO.2
COMMON SPEED SETPOINT START/STOP RUN PERMISSIVE SPEED FEEDBACK ASD RUNNING ASD FAULT 80% SPEED SETPOINT
CR1 M2 CR2
M3 CR2
CR2 M3
BACKUP FLOAT CONTROL PANEL
RFS2 6 7
LSH-2 SEAL LEAK SENSOR
TSH-2 MOTOR TEMP SWITCH

MATCHLINE X
120VAC POWER
24 VDC POWER
L1A 5A TB4-7 24+ 24- L1N
HS-2 H-O-A H O A XOO OOX XOO OOX
RMTH2 RMSL2 RPLC1 RBRM2 RPLMP2 RM2
RPLC1 RPLMP2
FROM I-12
TO SHEET I-14
RPLRST1 7 6
RRST2 2 10
RMSL2 1 3
YI-2 (R)
RM2 1 3
RMTH2 11 8
RRST2 1 4
LAH-2 SL2
TAH-2 MTH2
RMSL2 RMTH2
PUMP PROTECTION MODULE*

50mA 1A AI1.0 PUMP NO.2 MOTOR CURRENT
1A Q1.0 PUMP NO.2 CALL TO RUN
50mA I3.5 PUMP NO.2 IN HAND
50mA I3.4 PUMP NO.2 IN AUTO
50mA I3.7 PUMP NO.2 MOTOR OVERLOAD ALARM
50mA I6.1 PUMP NO.2 IN ASD MODE
50mA AO0.2 PUMP NO.2 SPEED CONTROL
50mA AI2.2 PUMP NO.2 SPEED INDICATION
50mA I3.6 PUMP NO.2 SEAL FAILURE ALARM
50mA I1.2 PUMP NO.2 ON/OFF
50mA I1.3 PUMP NO.2 HIGH TEMPERATURE ALARM

*CONTACTS ARE SHOWN IN POWERED UP STATE

LEGEND
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- • DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

KEYED NOTES:

(1) MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: | DGN BY: RHW
JOB NO: | DWG BY: RHW

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PUMP NO.2 CONTROL WIRING
DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN | HORIZ: | VERT:
CATEGORY NO. | SHEET NO. | OF
FOR CITY OF HOUSTON USE ONLY

DWG: I–13

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | ASD W/BYPASS | LIFT STATION CONTROL PANEL: DOOR | INTERIOR PANEL | PLC

PUMP NO.3 — PUMP JUNCTION BOX — 4-20mA CURRENT TRANSDUCER — VFD NO. 3 POWER MODULE — INPUT REACTOR — MCP — FROM MCC

MATCHLINE X

120VAC POWER
24 VDC POWER
L1A — 5A — TB4-8 — 24+ — 24- — L1N

IE-3 MOTOR OVERLOAD RELAY (MOR) (1)

CPT - 480-120VAC 1PH, 250VA MIN

HS-3B ASD BYPASS

ASD NO.3
COMMON
START/STOP
RUN PERMISSIVE
ASD RUNNING
ASD FAULT
80% SPEED SETPOINT
SPEED SETPOINT
SPEED FEEDBACK

HS-3 H-O-A

RMTH3 — RMSL3 — RPLC1 — RBRM3 — RM3 — RPLMP3 — TDLP3 — CR1 — CR2 — M1 — M2 — M3 — MOR — RPLRST1 — RRST3 — YI-3 — TDLP3F — RFS2 — LAH-3 SL3 — TAH-3 MTH3

FROM I-13
TO SHEET I-15

BACKUP FLOAT CONTROL PANEL

PUMP PROTECTION MODULE*

LSH-3 SEAL LEAK SENSOR △
TSH-3 MOTOR TEMP SWITCH △

50mA — AI1.2 — PUMP NO.3 MOTOR CURRENT
1A — Q1.1 — PUMP NO.3 CALL TO RUN
50mA — I4.1 — PUMP NO.3 IN HAND
50mA — I4.0 — PUMP NO.3 IN AUTO
50mA — I4.3 — PUMP NO.3 MOTOR OVERLOAD ALARM
50mA — I6.2 — PUMP NO.3 IN ASD MODE
50mA — AO0.4 — PUMP NO.3 SPEED CONTROL
50mA — AI2.4 — PUMP NO.3 SPEED INDICATION
50mA — I4.2 — PUMP NO.3 SEAL FAILURE ALARM
50mA — I1.4 — PUMP NO.3 ON/OFF
50mA — I1.5 — PUMP NO.3 HIGH TEMPERATURE ALARM

*CONTACTS ARE SHOWN IN POWERED UP STATE

LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- • DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

KEYED NOTES:

(1) MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: | DGN BY: RHW
JOB NO: | DWG BY: RHW

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PUMP NO.3 CONTROL WIRING DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN | HORIZ: | VERT:
CATEGORY NO. | SHEET NO. | OF
FOR CITY OF HOUSTON USE ONLY

DWG: I–14

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | ASD W/BYPASS | LIFT STATION CONTROL PANEL: DOOR | INTERIOR PANEL | PLC

PUMP JUNCTION BOX

PUMP NO.4

4-20mA CURRENT TRANSDUCER

VFD NO. 4 POWER MODULE

INPUT REACTOR

FROM MCC

MATCHLINE X

120VAC POWER

24 VDC POWER

L1A

5A TB4-9

24+

24-

L1N

HS-4 H-O-A

IE-4 MOTOR OVERLOAD RELAY (MOR)

(1) MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.

CPT - 480-120VAC 1PH, 250VA MIN

HS-4B ASD BYPASS

BACKUP FLOAT CONTROL PANEL

TDLP4F

ASD NO.4

COMMON, SPEED SETPOINT, START/STOP, RUN PERMISSIVE, SPEED FEEDBACK, ASD RUNNING, ASD FAULT, 80% SPEED SETPOINT

FROM I-14

TO SHEET I-16

LSH-4 SEAL LEAK SENSOR

TSH-4 MOTOR TEMP SWITCH

PUMP PROTECTION MODULE*

*CONTACTS ARE SHOWN IN POWERED UP STATE

50mA AI1.4 PUMP NO.4 MOTOR CURRENT

1A Q2.0 PUMP NO.4 CALL TO RUN

50mA I4.5 PUMP NO.4 IN HAND

50mA I4.4 PUMP NO.4 IN AUTO

50mA I4.7 PUMP NO.4 MOTOR OVERLOAD ALARM

50mA I6.3 PUMP NO.4 IN ASD MODE

50mA AO0.6 PUMP NO.4 SPEED CONTROL

50mA AI2.6 PUMP NO.4 SPEED INDICATION

50mA I4.6 PUMP NO.4 SEAL FAILURE ALARM

50mA I2.0 PUMP NO.4 ON/OFF

50mA I2.1 PUMP NO.4 HIGH TEMPERATURE ALARM

LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- ▪ DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

KEYED NOTES:

(1) MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PUMP NO.4 CONTROL WIRING DIAGRAM

WBS #: R-000267-127A-3

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN | HORIZ: | VERT:
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FOR CITY OF HOUSTON USE ONLY

DWG: I–15

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | ASD W/BYPASS | LIFT STATION CONTROL PANEL — DOOR | INTERIOR PANEL | PLC

MATCHLINE X

PUMP JUNCTION BOX

PUMP NO.5

4-20mA CURRENT TRANSDUCER

VFD NO. 5 POWER MODULE

INPUT REACTOR

FROM MCC

120VAC POWER
24 VDC POWER

L1A — 5A — TB4-10 — 24+ — L1N — 24-

HS-5 H-O-A

IE-5 MOTOR OVERLOAD RELAY (MOR) (1)

TDLP5

CPT - 480-120VAC 1PH, 250VA MIN

HS-5B ASD BYPASS

BACKUP FLOAT CONTROL PANEL

TDLP4F

ASD NO.5

COMMON, START/STOP, RUN PERMISSIVE, ASD RUNNING, ASD FAULT, 80% SPEED SETPOINT, SPEED SETPOINT, SPEED FEEDBACK

FROM I-15

TO SHEET I-17

RPLRST2

RRST5

RMSL5

YI-5

RMTH5

RFS3

LSH-5 SEAL LEAK SENSOR

TSH-5 MOTOR TEMP SWITCH

LAH-5 SL5

TAH-5 MTH5

PUMP PROTECTION MODULE*

*CONTACTS ARE SHOWN IN POWERED UP STATE

50mA — AI1.6 PUMP NO.5 MOTOR CURRENT

1A — Q2.1 PUMP NO.5 CALL TO RUN

50mA — I5.1 PUMP NO.5 IN HAND

50mA — I5.0 PUMP NO.5 IN AUTO

50mA — I5.3 PUMP NO.5 MOTOR OVERLOAD ALARM

50mA — I6.4 PUMP NO.5 IN ASD MODE

50mA — AO0.8 PUMP NO.5 SPEED CONTROL

50mA — AI2.8 PUMP NO.5 SPEED INDICATION

50mA — I5.2 PUMP NO.5 SEAL FAILURE ALARM

50mA — I2.2 PUMP NO.5 ON/OFF

50mA — I2.3 PUMP NO.5 HIGH TEMPERATURE ALARM

LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- • DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

KEYED NOTES:

(1) MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.

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TEXAS P.E. NO. 68078
JULY 2025
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Phone: (713)-365-8288

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CITY OF HOUSTON
HARRIS COUNTY, TEXAS

DATE: _____ DGN BY: RHW
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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PUMP NO.5 CONTROL WIRING DIAGRAM

WBS #: R-000267-127A-3

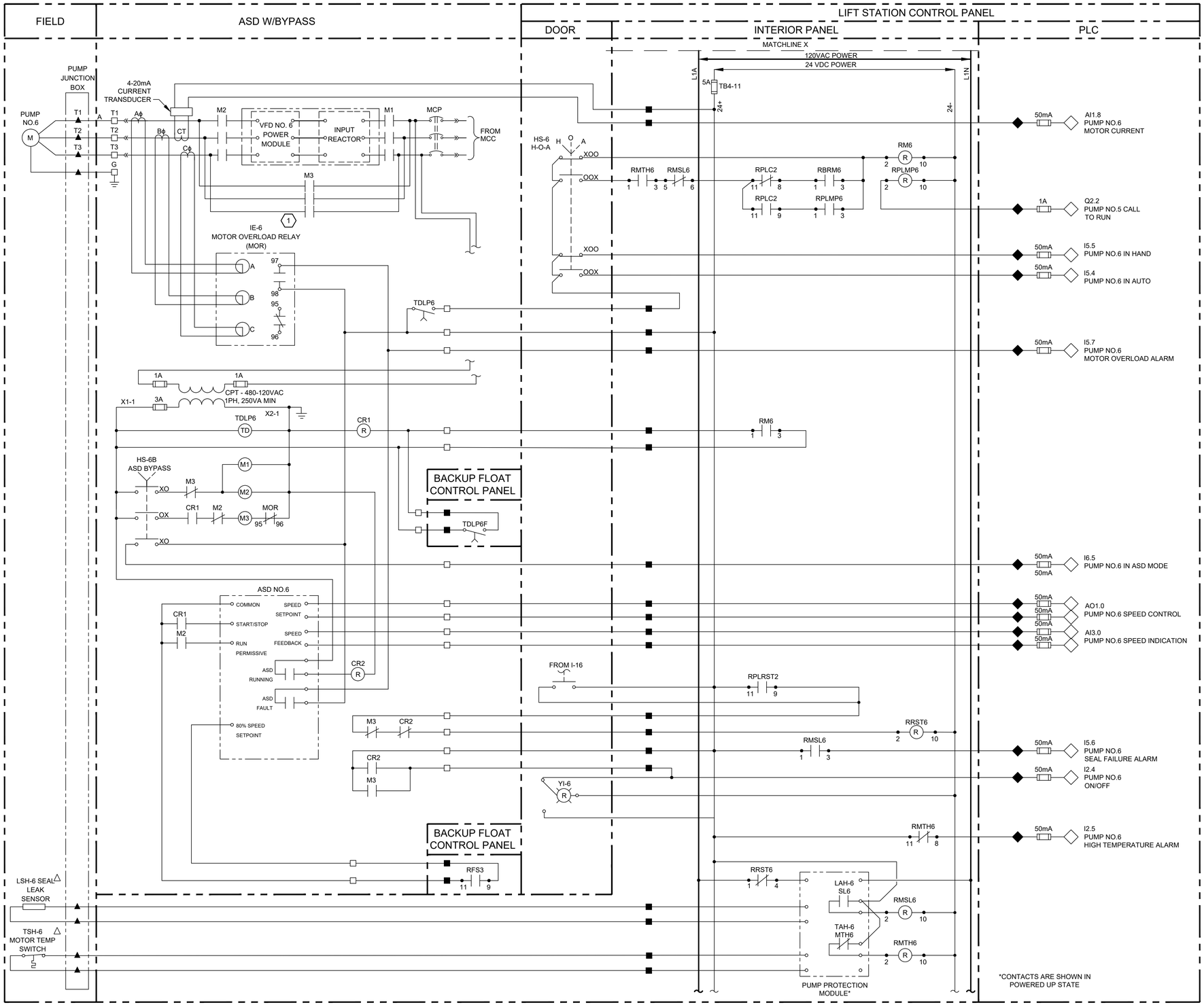
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRAWING SCALE: AS SHOWN HORIZ: VERT:
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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



LEGEND

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- • DEVICE OR FIELD TERMINAL LOCATED REMOTE
- □ DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- ■ FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- ● DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

KEYED NOTES:

1. MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy natural gas utilities shown.
(Gas services lines are not shown). This signature not to be used for conflict verification.

Signature Valid for six months.

Date:

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)

Signature Valid for six months.

Date:

Approved for AT&T Texas / SWBT underground conduit facilities only.
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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
PUMP NO.6 CONTROL WIRING DIAGRAM

WBS #: R-000267-127A-3

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FIELD | MOTOR CONTROL CENTER | BACKUP FLOAT CONTROL PANEL: DOOR, INTERIOR PANEL | LIFT STATION CONTROL PANEL: INTERIOR PANEL, PLC

L2 — 5A — 120VAC POWER FROM PANELBOARD — L2N

PM1 (11, 12)

YI-1 (W) POWER ON

INSTRUMENTATION JUNCTION BOX I

NORTH WELL FLOATS

HIGH LEVEL FLOAT FS1

HIGH-HIGH LEVEL FLOAT FS2

HIGH -HIGH LEVEL FLOAT FS4

HIGH LEVEL FLOAT FS3

SOUTH WELL FLOATS

INSTRUMENTATION JUNCTION BOX II

INTRINSICALLY SAFE RELAY — ISO 1 (7, 5, 8, 6, 1, 4, 2, 3)

INTRINSICALLY SAFE RELAY — ISO 2 (7, 5, 8, 6, 1, 4, 2, 3)

RFS1 (6, 7)

TDLP1F (TD) (5 SEC)

TDLP2F (TD) (10 SEC)

TDLP3F (TD) (15 SEC)

TDLP4F (TD) (20 SEC)

TDLP5F (TD) (25 SEC)

TDLP6F (TD) (30 SEC)

RFS1 (R) (2, 10)

RFS2 (R) (2, 10)

RFS3 (R) (2, 10)

RFS1 (1, 3)

50mA — I0.2 FLOAT HIGH-HIGH LEVEL ALARM ALL PUMPS ON

MATCHLINE X

120 VAC POWER

24VDC

L1A — +24 — -24 — L1N

MATCHLINE X

GENERAL NOTES:

A. ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

B. ALL INTRINSICALLY SAFE WIRING SHALL BE SEPARATED FROM NON-INTRINSICALLY SAFE WIRING. REFER TO NEC ARTICLE 504 FOR INSTALLATION OF INTRINSICALLY SAFE WIRING.

AS BUILT

FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

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SCOTT STREET NO 1 - LIFT STATION REHABILITATION

INSTRUMENTATION
BACKUP FLOAT CONTROL PANEL WIRING DIAGRAM

WBS #: R-000267-127A-3

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DWG: I–18

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