CITY OF LYNNWOOD

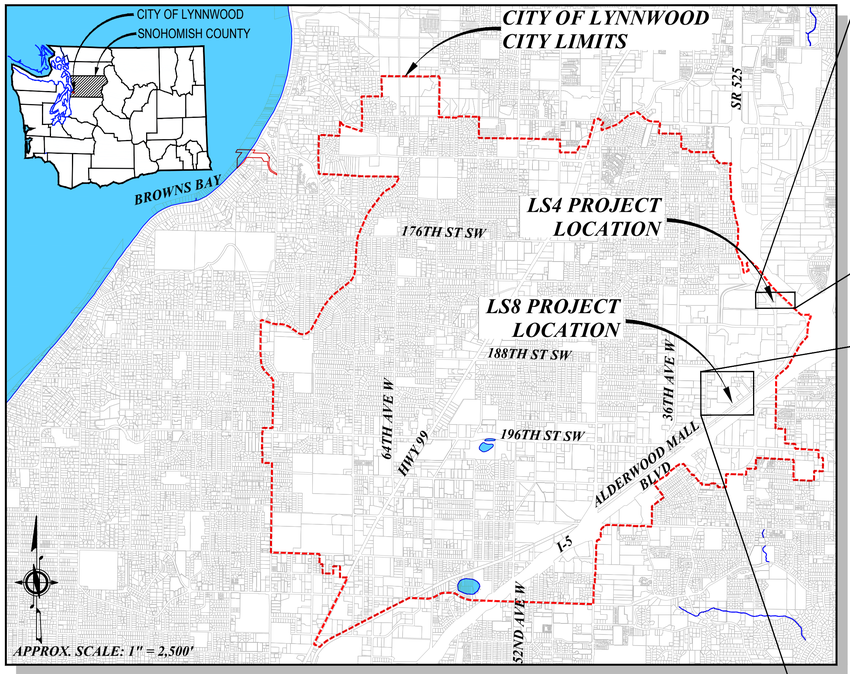
LYNNWOOD
WASHINGTON

LIFT STATIONS 4 & 8 IMPROVEMENTS

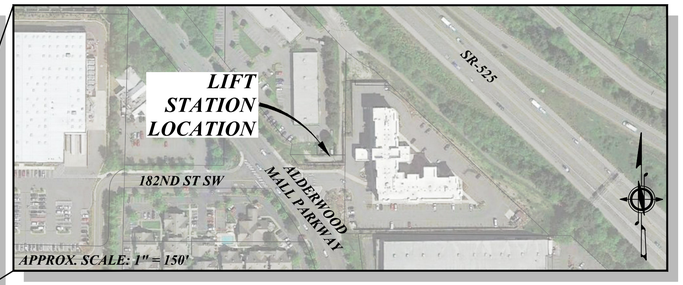
ISSUED FOR BIDDING

APRIL 2019 *VOLUME 2 OF 2*

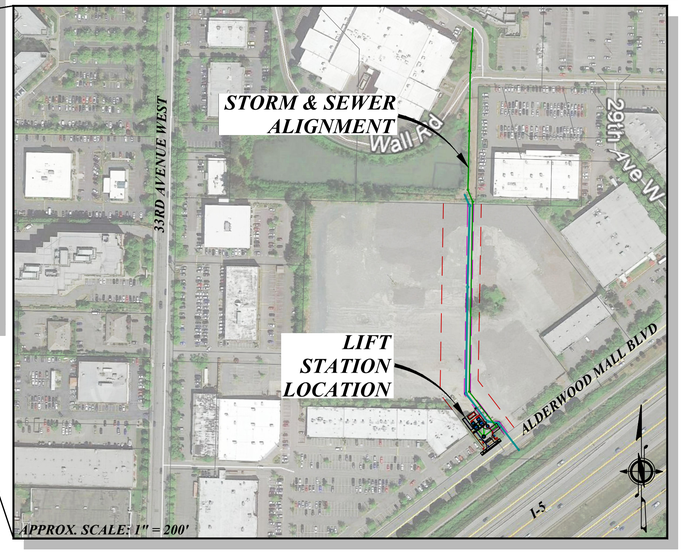
PROJECT VICINITY MAP

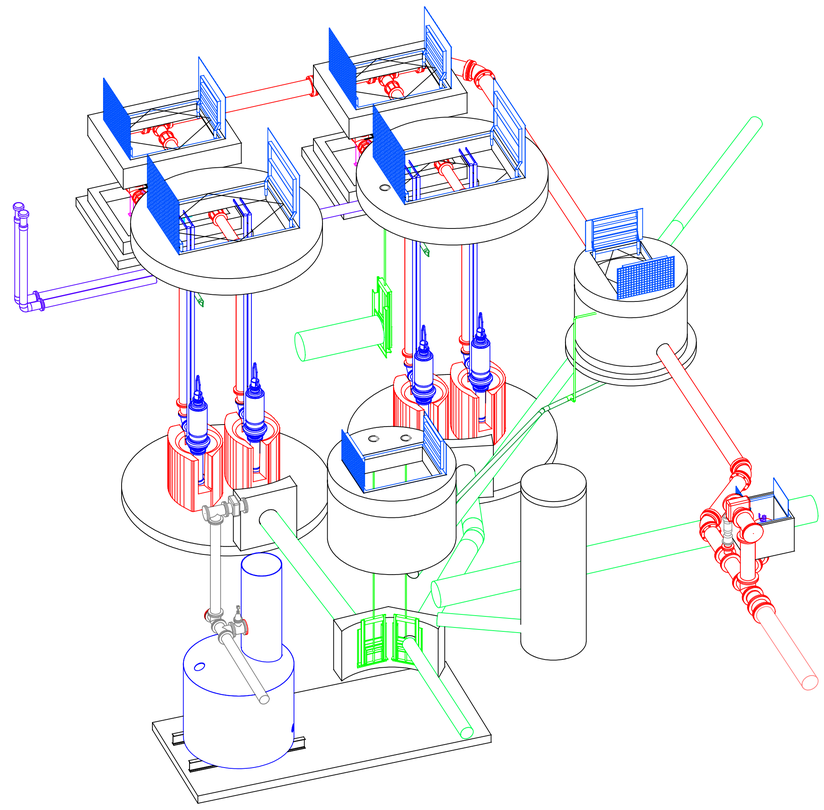


LS4 PROJECT LOCATION MAP



LS8 PROJECT LOCATION MAP





MAYOR
NICOLA SMITH

PUBLIC WORKS DIRECTOR
WILLIAM A. FRANZ, P.E.

CITY COUNCIL
BENJAMIN GOODWIN
CHRISTINE FRIZZELL
GEORGE HURST
IAN COTTON
RUTH ROSS
SHANNON SESSIONS
SHIRLEY SUTTON

CALL 48 HOURS BEFORE YOU DIG
ONE CALL 1-800-424-5555 (811)

REPORT ALL SPILLS
DEPT. OF ECOLOGY 1-800-258-5990

RICHARD L. BALLARD — STATE OF WASHINGTON — 32878 — REGISTERED PROFESSIONAL ENGINEER — SIGNED: 03/27/19

EDWIN HALL — STATE OF WASHINGTON — 38889 — REGISTERED PROFESSIONAL ENGINEER — SIGNED: 03/27/19

BRIAN J. FESSENDEN — STATE OF WASHINGTON — 49451 — REGISTERED PROFESSIONAL ENGINEER — SIGNED: 03/27/19

TOM MARSHALL CONNER — STATE OF WASHINGTON — 44672 — PROFESSIONAL ENGINEER — SIGNED: 03/27/19

CHRISTOPHER MICHAEL BROOKS — STATE OF WASHINGTON — 45317 — REGISTERED PROFESSIONAL ENGINEER — SIGNED: 03/27/19

PREPARED BY:
RH2 ENGINEERING
40 YEARS SINCE 1978

PLOT DATE: Mar. 26, 19 FILE PATH: DATA/LYNN/117-098/CAD/LS8-D-COV.DWG

GENERAL NOTES

1. CONTRACTOR SHALL CALL 1-800-424-5555 FOR UTILITY LOCATES 48 HOURS BEFORE CONSTRUCTION. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BY THE APPROPRIATE UTILITY LOCATING PROFESSIONALS, PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND THE UTILITY COMPANY WHEN A CONFLICT OCCURS OR WHEN A CONFLICT IS ANTICIPATED.
2. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL PRIOR TO IMPLEMENTATION OR CONSTRUCTION.
3. CONTRACTOR MUST KEEP A COPY OF THE APPROVED PLANS ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE PUBLIC AND PREVENT NUISANCES. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
5. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING COMPLETE AS-CONSTRUCTED (AS BUILT) RECORDS, INCLUDING AS-BUILT SURVEYING.
6. CONSTRUCTION OF IMPROVEMENTS SHALL CONFORM TO THE CURRENT EDITION OF THE CITY OF LYNNWOOD ENGINEERING STANDARDS AND THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, 2018 EDITION, AS ISSUED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION. THESE DOCUMENTS HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS.
7. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL CONSTRUCTION STAKING ON THIS PROJECT. STAKING FOR GRADES AND ALIGNMENT SHALL BE PERFORMED BY AN ENGINEERING OR SURVEYING FIRM LICENSED AND CAPABLE OF PERFORMING SUCH WORK. RIGHT OF WAY AND EASEMENT LIMITS MUST BE CLEARLY IDENTIFIED IN THE FIELD DURING CONSTRUCTION.
8. CONTRACTOR SHALL RESTORE MARKERS FOR FRONT PROPERTY CORNERS THAT ARE DISTURBED BY CONSTRUCTION. MARKERS SHALL BE RE-ESTABLISHED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF WASHINGTON.
9. A PRECONSTRUCTION CONFERENCE AND 24-HOUR NOTICE WILL BE REQUIRED PRIOR TO STARTING CONSTRUCTION OR RESTARTING CONSTRUCTION AFTER A PERIOD OF MORE THAN 5 DAYS OF NO WORK BEING PERFORMED.
10. CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO CONDITIONS EQUAL OR BETTER TO THOSE FOUND PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL DETERMINE THE SCOPE, TYPE, SIZE, QUANTITY, METHOD OF INSTALLATION, OPERATION, AND REMOVAL OF THE DEWATERING SYSTEM NECESSARY TO KEEP THE EXCAVATION SITE DEWATERED TO STABILIZE THE SOILS FOR CONSTRUCTION. THE DEWATERING SYSTEM MUST BE LOCATED WITHIN THE CONSTRUCTION EASEMENT.
12. THE CONTRACTOR SHALL DISCHARGE WATER FROM THE DEWATERING SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF STATE AND LOCAL REGULATIONS AND THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS. AT NO TIME SHALL SILT LADEN WATER BE DISCHARGED OFF SITE. SEE EXISTING SITE AND TESC PLAN FOR ADDITIONAL STORMWATER NOTES.
13. THE CONTRACTOR SHALL CLEANUP ALL AREAS AFFECTED BY THEIR ACTIVITIES TO THE SATISFACTION OF THE CITY REPRESENTATIVE BY THE END OF EACH WORKING DAY OR MORE FREQUENTLY IF REQUIRED BY THE CITY REPRESENTATIVE. THIS INCLUDES REMOVAL OF ALL DUST, MUD, ROCKS, ASPHALT DEBRIS, AND REFUSE FROM STREETS, SIDEWALKS, DRIVEWAYS, AND ANY OTHER AREAS AFFECTED BY THE CONSTRUCTION ACTIVITIES. FAILURE TO CLEANUP TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE WILL NECESSITATE A SHUTDOWN OF THE PROJECT UNTIL CLEANUP IS PROPERLY PERFORMED. DAILY CLEANUP IS AN INTEGRAL PART OF EROSION AND POLLUTION CONTROL.
14. THE EXISTING LIFT STATION SHALL NOT BE PERMANENTLY TAKEN OUT OF SERVICE, UNTIL THE LIFT STATION CONSTRUCTED UNDER THIS CONTRACT HAS BEEN INSTALLED, TESTED, AND APPROVED IN WRITING BY THE OWNER. A TEMPORARY PUMPING SYSTEM CAN BE INSTALLED DURING CONSTRUCTION TO ALLOW FOR CONSTRUCTION OF THE PROPOSED LIFT STATION TO BE COMPLETED. THE CONTRACTOR SHALL PROVIDE A PLAN TO THE OWNER FOR APPROVAL THAT DETAILS THE PROPOSED METHOD OF KEEPING THE LIFT STATION OPERATIONAL DURING THE CONSTRUCTION WORK. INSTALLATION OF THE TEMPORARY PUMPING SYSTEM SHALL NOT BEGIN UNTIL WRITTEN APPROVAL HAS BEEN OBTAINED FROM THE OWNER. A HIGH LEVEL ALARM FLOAT SHALL BE CONNECTED TO THE EXISTING TELEMETRY SYSTEM FOR PROVIDING NOTIFICATION TO THE OWNER IF THE TEMPORARY SYSTEM HAS FAILED. THE CONTRACTOR MUST RESPOND TO ANY TEMPORARY SYSTEM FAILURE.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED TO PERFORM THE WORK.

SEWER FORCE MAIN CONSTRUCTION NOTES

1. GRAVITY MAIN TRENCH, FORCE MAIN TRENCH, AND ALL EXCAVATED AREAS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND WITH SECTIONS 7-9.3(10) AND 7-9.3(11) OF THE STANDARD SPECIFICATIONS. COMPACTION TESTING SHALL BE REQUIRED DURING BACKFILLING OPERATIONS ON ALL PIPE, ALL OPEN CUTS AND/OR CROSSINGS WITHIN PAVED OR TRAVELED AREAS AND AT THE DISCRETION OF THE OWNER. IF TRENCH BACKFILL DOES NOT MEET COMPACTION REQUIREMENTS, CONTRACTOR SHALL EXCAVATE, RE-COMPACT AND RETEST MATERIAL AT CONTRACTOR'S EXPENSE.
2. ENGINEER-APPROVED THRUST RESTRAINTS ARE REQUIRED FOR ALL UNRESTRAINED FITTINGS. THRUST BLOCKING IS THE PREFERRED METHOD UNLESS OTHERWISE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PIPE JOINT RESTRAINT SO THAT THE PIPE DOES NOT SEPARATE DUE TO THERMAL EXPANSION, UNRESOLVED THRUST FORCES, OR DESTABILIZATION OF STEEP SLOPES.
3. AT POINTS WHERE EXISTING THRUST BLOCKING EXISTS, MINIMUM CLEARANCE OF UNDISTURBED SOIL BETWEEN THE CONCRETE BLOCKING AND PROPOSED BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.
4. THE CONTRACTOR SHALL PERFORM PRESSURE TESTING IN ACCORDANCE WITH THE SPECIFICATIONS TO 100 PSI FOR THE FORCE MAIN PIPING, UNLESS OTHERWISE APPROVED. THE ENGINEER AND OWNER HAVE DISCRETION TO MODIFY THE TESTING REQUIREMENTS AS DEEMED APPROPRIATE.

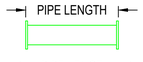
TESC GENERAL NOTES

1. REFER TO GENERAL PLAN NOTES FOR ADDITIONAL REQUIREMENTS.
2. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED, AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
4. THE BOUNDARIES OF THE CLEARING LIMITS INDICATED BY THE TEMPORARY CONSTRUCTION EASEMENTS AND THE CITY PROPERTY LINES SHOWN ON THIS PLAN (INCLUDING INDIVIDUAL TREES TO BE SAVED) SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED AS OUTLINED ON THE TYPICAL CONSTRUCTION SEQUENCE AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G. ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
7. CONSTRUCTION ACCESS TO THE SITE SHALL BE ONLY AS SHOWN ON THE APPROVED PLANS. ALL VEHICLES LEAVING THE SITE, ONTO PUBLIC RIGHTS OF WAY, SHALL BE CLEANED TO PREVENT "TRACKING" OF MUD, DIRT OR OTHER DEBRIS.
8. THE CONTRACTOR SHALL CLEAN ACCESS STREETS AND RIGHT-OF-WAY USING ONLY VACUUM SWEEPERS AT LEAST DAILY OR MORE FREQUENTLY AS MAY BE NECESSARY AND SO DIRECTED BY THE CITY.
9. CLEAN OR REMOVE AND REPLACE INLET PROTECTION DEVICES WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
10. STOCKPILES ARE TO BE LOCATED IN SAFE AREAS AND ADEQUATELY PROTECTED BY TEMPORARY SECURED PLASTIC COVER, SEEDING OR MULCHING. HYDROSEEDING IS PREFERRED.
11. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.
12. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 2 DAYS DURING THE WET SEASON OR 7 DAYS DURING THE DRY, SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G. SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.).
13. VEGETATION SHALL BE ESTABLISHED ON AREAS DISTURBED OR ON AREAS OF CONSTRUCTION AS NECESSARY TO MINIMIZE EROSION. AREAS TO BE ROUGH GRADED WITH FINISHED GRADING TO FOLLOW NEAR PROJECT COMPLETION ARE TO BE SEEDED WITH ANNUAL, PERENNIAL OR HYBRID RYE GRASS. THIS ALSO INCLUDES PERIMETER DIKES AND THE SEDIMENT BASIN EMBANKMENT. HYDROSEEDING IS PREFERRED.
14. IMMEDIATELY FOLLOWING FINISH GRADING, PERMANENT VEGETATION WILL BE APPLIED AS APPROVED PER THE APPROVED PLANS, CURRENT WSDOT STANDARDS AND SPECIFICATIONS AND THE CITY OF LYNNWOOD REQUIREMENTS.

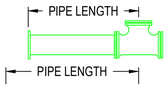
PIPE LENGTH MEASUREMENTS

PIPE LENGTHS CALLED OUT ON PLANS ARE MEASURED AS FOLLOWS:

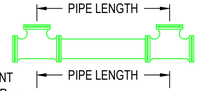
FLANGE x FLANGE (FLxFL) PIPE MEASURED FROM FACE OF FLANGE TO FACE OF FLANGE.



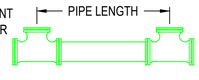
FLANGE x PLAIN END (FLxPE) PIPE MEASURED FROM FACE OF FLANGE TO CENTER OF FITTING.



PLAIN END x PLAIN END (PExPE) PIPE MEASURED FROM CENTER OF FITTING TO CENTER OF FITTING.



RESTRAINED JOINT x RESTRAINED JOINT (RJxRJ) PIPE MEASURED FROM CENTER OF FITTING TO CENTER OF FITTING.



FITTINGS ARE ASSUMED TO BE STANDARD LENGTH 125#, 250# FLANGED OR COMPACT CLASS 350 MECHANICAL JOINTS. CONTRACTOR RESPONSIBLE FOR VERIFYING LENGTHS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE INTO ACCOUNT ANY VARIATIONS IN FITTING DIMENSIONS.

NORTHING AND EASTING POINTS

TEES:

BENDS:

EXISTING UTILITIES

1. ALL EXISTING UTILITIES INDICATED ON THE PLANS HAVE BEEN PLOTTED FROM THE BEST INFORMATION AVAILABLE TO THE ENGINEER AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. THE SOURCE OF INFORMATION GENERALLY CONSISTS OF CONSTRUCTION RECORDS, UTILITY LOCATES, AND OTHER DATA OBTAINED VERBALLY FROM OFFICIALS ASSOCIATED WITH THE PARTICULAR UTILITY. OWNER AND ENGINEER DO NOT GUARANTEE AND DO NOT ASSUME ANY RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION. IT IS UNDERSTOOD THAT OTHER ABOVE GROUND AND UNDERGROUND FACILITIES NOT SHOWN ON THE PLANS MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN TO AVOID DAMAGE AND/OR DISTURBANCE TO SUCH UTILITIES, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. CONTRACTOR SHALL PRESERVE, PROTECT AND SUPPORT ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION.
2. OVERHEAD UTILITIES: NOT ALL OVERHEAD UTILITIES MAY BE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO INDEPENDENTLY VERIFY ALL OVERHEAD UTILITIES. THE CONTRACTOR SHALL ACCOUNT FOR ACCOMMODATING ALL OVERHEAD UTILITIES IN HIS BID AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR FACILITATING OVERHEAD UTILITIES.
3. POWER AND WATER: WHERE THESE UTILITIES CROSS THE PROPOSED SEWER MAIN, THE DEPTH OF EACH IS SHOWN ON THE PROFILES AND IS BASED ON TYPICAL LAYING DEPTHS FOR EACH OF THESE UTILITIES. ACTUAL DEPTHS ARE UNKNOWN AND MAY VARY SIGNIFICANTLY. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF UTILITY CROSSING DEPTH CONFLICTS ARISE.
4. PROVIDE STYROFOAM CUSHION BETWEEN PIPING AT PIPE CROSSINGS WHERE PIPES CROSS WITH FEWER THAN 12 INCHES OF VERTICAL SEPARATION. A SAND CUSHION MAY BE USED IN AREAS WHERE ADEQUATE COMPACTION CAN BE ACHIEVED AND AS APPROVED BY THE OWNER.

SECTION AND DETAIL REFERENCES

THE FOLLOWING CONVENTIONS HAVE BEEN USED WITHIN THESE DRAWINGS TO REFER THE READER BETWEEN THE SECTION/DETAIL AND THE PLAN FROM WHICH IT IS REFERENCED.

REFERENCE BUBBLES

PLAN REFERENCE BUBBLE - REFERS READER BACK TO THE PLAN FROM WHICH THE DETAIL OR SECTION ORIGINATED.

DETAIL/SECTION REFERENCE BUBBLE - REFERS READER TO THE DRAWING ON WHICH THE DETAIL OR SECTION IS LOCATED.

WHERE, ID = SECTION/DETAIL REFERENCE NUMBER
= DRAWING NUMBER ON WHICH DETAIL ORIGINATED OR RESIDES.

SECTION/DETAIL REFERENCE NUMBER CONVENTIONS:

SECTIONS OR ELEVATIONS SHOULD HAVE A LETTER REFERENCE NUMBER (A THROUGH ZZ).

DETAILS SHOULD HAVE AN ALPHANUMERIC REFERENCE NUMBER (A-Z OR 1-1799).
DISCIPLINE SPECIFIC STANDARD DETAILS FOLLOW THE DIVISION NUMBER.

EXAMPLES:
2XX = SITE WORK OR CIVIL STANDARD DETAILS
3XX = CONCRETE STANDARD DETAILS
4XX = MASONRY STANDARD DETAILS
5XX = STRUCTURAL CONNECTION STANDARD DETAILS
6XX = MECHANICAL STANDARD DETAILS
7XX = ELECTRICAL STANDARD DETAILS

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555 (811)
UNDERGROUND SERVICE

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40 YEARS SINCE 1978
BOTHELL, WA
22722 29th Drive SE, Suite 210
www.rh2.com 1.800.720.8052

RICHARD L. BALLARD — STATE OF WASHINGTON — 52875 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

EDWIN HALVERSON — STATE OF WASHINGTON — 38889 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS

LYNNWOOD WASHINGTON

GENERAL NOTES AND INFO I

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

REVISIONS

ENGINEER: OMP
REVIEWED: RJF
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-GEN01.DWG
JOB NO.: 117-098

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: G01
SHEET NO.: 01
48

SURVEY NOTES

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITY SYSTEMS, AS SHOWN HEREON, ARE TAKEN FROM UTILITY LOCATE PAINT MARKS OR AS-BUILT PLANS AND ARE SHOWN IN AN APPROXIMATE WAY ONLY.
2. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. ALL LOCATOR SERVICES SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION OR SUBSURFACE EXPLORATION. CALL 1-800-424-5555.
3. THIS PROJECT IS LOCATED IN SECTIONS 15 & 22, TOWNSHIP 27 NORTH, RANGE 4 EAST, SNOHOMISH COUNTY WA. CITY OF LYNNWOOD.
4. FIELD SURVEY: DECEMBER, 2006 AND SEPTEMBER, 2015
5. CONTOUR INTERVAL = 1 FOOT
6. THE CONTOURS SHOWN ON THE BRIDGES OVER 37TH AVE AND 196TH STREET REFLECT THE ROAD SURFACE OF ALDERWOOD MALL BLVD AND NOT THE GROUND BELOW.
7. THE CATCH BASIN AND MANHOLE LIDS SHOWN ON THIS SURVEY REFLECT THEIR POSITION ON THE SURFACE AND NOT LOCATIONS OF UNDERGROUND STRUCTURES.
8. THE CATCH BASINS, STORM DRAIN AND SANITARY SEWER STRUCTURES SHOWN ON THIS SURVEY REFLECT THE CENTER OF THE RIM ON THE SURFACE AND NOT THE LOCATION OF UNDERGROUND STRUCTURES. STORM DRAIN AND SEWER LINES SHOWN ARE DRAWN FROM CENTER OF RIM TO CENTER OF RIM AND MAY NOT REFLECT ACTUAL LOCATION OF UNDERGROUND LINES.
9. THE LOCATION AND DIMENSIONS OF UNDERGROUND VAULTS HAVE NOT BEEN VERIFIED AND ARE APPROXIMATE.
10. ROW AND PARCEL LINES PER SNOHOMISH COUNTY GIS AND CALCULATED FROM PLANS ON FILE AT THE CITY LYNNWOOD, 196th STREET SW/SR 524 INTERCHANGE DATED SEPT. 1997 AND I-5/196th STREET SW INTERCHANGE DATED APRIL/MAY 2001. REFERENCE SURVEYS USED ARE AFN 8411165022, 8506250193, 8703035002, 9110175004, 9603155004 AND 200609225358.

HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83/91

VERTICAL DATUM

NAVD 88

NOTES FROM ADDITIONAL SURVEY PERFORMED BY AXIS OCTOBER 2018

1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY COMPLETED ON OCTOBER 30, 2018 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
2. THIS SURVEY DISCLOSES FACTORS OF RECORD AND ON THE GROUND AFFECTING THE SUBJECT PROPERTY BOUNDARY, BUT IT DOES NOT PURPORT TO LEGALLY RESOLVE RELATED PROPERTY LINE DISPUTES. WHERE AMBIGUITIES ARE NOTED, AXIS RECOMMENDS THAT THE OWNER CONSULT WITH LEGAL COUNSEL TO DETERMINE HOW BEST TO INTERPRET THEIR PROPERTY RIGHTS AND ADDRESS ANY POTENTIAL PROPERTY LINE DISPUTES.
3. UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON ASBUILT FIELD LOCATION OF EXISTING STRUCTURES. FIELD LOCATION OF UTILITIES BASED ON LOCATOR PAINT MARKINGS AND LOCATIONS BASED ON UTILITY MAPS FROM CITY AND UTILITY DRAWINGS INDICATING REPORTED UTILITY INSTALLATIONS. OTHER UTILITIES MAY EXIST. NO SUB-SURFACE EXPLORATION WAS MADE TO VERIFY UTILITY ROUTINGS AND THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO DESIGN FOR VERIFICATION.
4. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN COMPILED FROM VARIOUS PUBLIC SOURCES AND HAVE NOT BEEN ESTABLISHED BY FIELD SURVEY. THEY ARE SHOWN HEREON TO AID IN THE INTERPRETATION OF THE MAP AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY.
5. PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING LEICA GS14 GPS/GNSS EQUIPMENT EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING LEICA ELECTRONIC 1201 TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WACS 332-130-080/090.

TBM 'A'

SET CHISELED SQUARE IN NE CORNER OF POWER VAULTS
ELEVATION: 388.42'

TBM 'B'

SET R.R. SPIKE IN SE FACE OF UTILITY POLE, UP 2.0'
ELEVATION: 387.49'

PROJECT DATA

LS4 PROJECT DESCRIPTION:
ADDRESS: ADJACENT TO 18121 ALDERWOOD MALL PARKWAY

THE LYNNWOOD LIFT STATION 4 IMPROVEMENTS PROJECT WILL INCLUDE CONSTRUCTION OF APPROXIMATELY 120 LF OF SANITARY SEWER FORCEMAIN, 100 LF OF SANITARY SEWER GRAVITY MAIN, AND PUMP IMPELLERS AND MOTOR STARTERS REPLACEMENT.

LS8 PROJECT DESCRIPTION:
ADDRESS: 3015 ALDERWOOD MALL BLVD

THE LYNNWOOD LIFT STATION 8 IMPROVEMENTS PROJECT WILL INCLUDE ABANDONMENT OF THE EXISTING PUMP STATION, AND PLACEMENT OF NEW WET WELLS, CHECK VALVE VAULTS, METER VAULT, ELECTRICAL PANELS UNDER A PROTECTIVE STRUCTURE AND BYPASS PORT. THE TWO NEW WET WELLS WILL EACH HOUSE TWO 1,000 GPM PUMPS. IN CONJUNCTION WITH THE ABOVE IMPROVEMENTS, APPROXIMATELY 120 LF OF SANITARY SEWER FORCEMAIN , 1,075 LF OF SANITARY SEWER GRAVITY MAIN AND 710 LF OF STORM SEWER WILL BE CONSTRUCTED.

- TYPE OF CONSTRUCTION PER IBC: TYPE III-B
- TOTAL ROOF AREA: 172 SF
- OCCUPANCY CLASSIFICATION PER IBC: UTILITY AND MISCELLANEOUS GROUP U
- OCCUPANCY LOAD: N/A

** SEE DWG NO. S01 FOR REQUIRED SPECIAL INSPECTIONS AND DESIGN CODES **

ABANDONMENT NOTES

THE CITY SHALL BE SOLE DETERMINER OF APPROPRIATE ABANDONMENT PROCEDURES AND METHODS. CONTRACTOR SHALL COORDINATE WITH THE CITY TO DETERMINE WHETHER TO SALVAGE OR DISPOSE OF REMOVED FACILITIES. UNUSABLE EQUIPMENT SHALL BE DISPOSED OF BY THE CONTRACTOR. THE FOLLOWING METHODS ARE APPROVED ABANDONMENT PROCEDURES FOR TERMINATED FACILITIES.

LIFT STATION
UPON THE COMPLETE OPERATION OF TEMPORARY PUMPING SYSTEM AND APPROVAL BY THE CITY IN WRITING, THE CONTRACTOR SHALL ABANDON THE EXISTING LIFT STATION AS DETAILED HEREIN ONLY AFTER APPROVAL FROM THE CITY IN WRITING. REMOVE ALL PUMPS, PIPES, FITTINGS, TELEMETRY EQUIPMENT, AND ALL OTHER APPURTENANCES FROM INSIDE THE EXISTING PUMP STATION. REFER TO DWG NOs. C03 AND C04 FOR ITEMS THAT ARE TO BE DISPOSED OF AND ITEMS THAT ARE TO BE RETURNED TO THE CITY.

LEGEND

EXISTING LEGEND

- SET REBAR
- MAG NAIL
- RIGHT OF WAY
- RIGHT OF WAY CENTERLINE
- PROPERTY BOUNDARY
- EASEMENT
- 390 MAJOR CONTOUR
- 389 MINOR CONTOUR
- WATER METER
- FIRE HYDRANT
- WATER VALVE
- WATER MARKER
- HOSE BIB
- W WATER MAIN
- UTILITY POLE
- UTILITY TRANSFORMER
- TELEPHONE VAULT
- POWER VAULT
- SITE LIGHT
- T UNDERGROUND TELEPHONE
- P UNDERGROUND POWER
- OHP OVERHEAD POWER
- CATCH BASIN (ROUND)
- CATCH BASIN (RECTANGULAR)
- ST STORM PIPE
- SEWER MANHOLE
- SEWER STRUCTURE
- SEWER VALVE
- SEWER CLEANOUT
- SS SEWER GRAVITY MAIN
- SSFM SEWER FORCE MAIN
- GAS METER
- G GAS MAIN
- TREE
- VEGETATION
- ROCK/ROCKERY
- EDGE OF WATER
- TOP TOP OF SLOPE
- FENCE
- SITE POST
- BOLLARD
- CHANNELIZATION
- RETAINING WALL
- BUILDING EDGE
- ROADWAY ASPHALT
- CONCRETE
- GRAVEL

PROPOSED LEGEND

DEMOLITION LEGEND

- SAWCUT LINE
- ASPHALT REMOVAL
- CONCRETE REMOVAL
- GRAVEL REMOVAL
- VEGETATION REMOVAL AREA
- CLEARING AND GRUBBING AREA
- STABILIZED CONSTR. ENTRANCE
- INLET PROTECTION
- STRAW WATTLES
- SILT FENCE
- UTILITY RELOCATION LIMITS

SITE LEGEND

- 1170 MAJOR CONTOUR
- 1171 MINOR CONTOUR
- P ELECTRICAL CONDUIT
- FO FIBER OPTIC CONDUIT
- JUNCTION BOX
- CHAIN LINK FENCE
- ORNAMENTAL FENCE
- WATER SERVICE
- CONCRETE
- ASPHALT
- CRUSHED SURFACING TOP COURSE
- DETECTABLE WARNING SURFACE

UTILITY LEGEND

- STORM GRAVITY PIPE
- STORM MANHOLE
- SEWER GRAVITY PIPE
- SEWER MANHOLE
- GRAVEL RESTORATION
- LANDSCAPE RESTORATION
- ASPHALT RESTORATION
- CONCRETE RESTORATION

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02	GENERAL NOTES AND INFO II	G02
03	STORM & SEWER EXISTING SITE AND DEMOLITION PLAN I	C01
04	STORM & SEWER EXISTING SITE AND DEMOLITION PLAN II	C02
05	EXISTING SITE & DEMOLITION PLAN	C03
06	EXISTING LIFT STATION DEMOLITION PLAN AND PHOTOS	C04
07	STORM & SEWER PLAN AND PROFILE I	C05
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10	STORM & SEWER SECTIONS	C08
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19	STRUCTURAL PLAN	S02
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SIGNED: 03/27/19

EDWIN HALVERSON — STATE OF WASHINGTON — 38889 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

GENERAL NOTES AND INFO II

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-GEN01.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: OMP
REVIEWED: RJF

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: G02
SHEET NO.: 02
48

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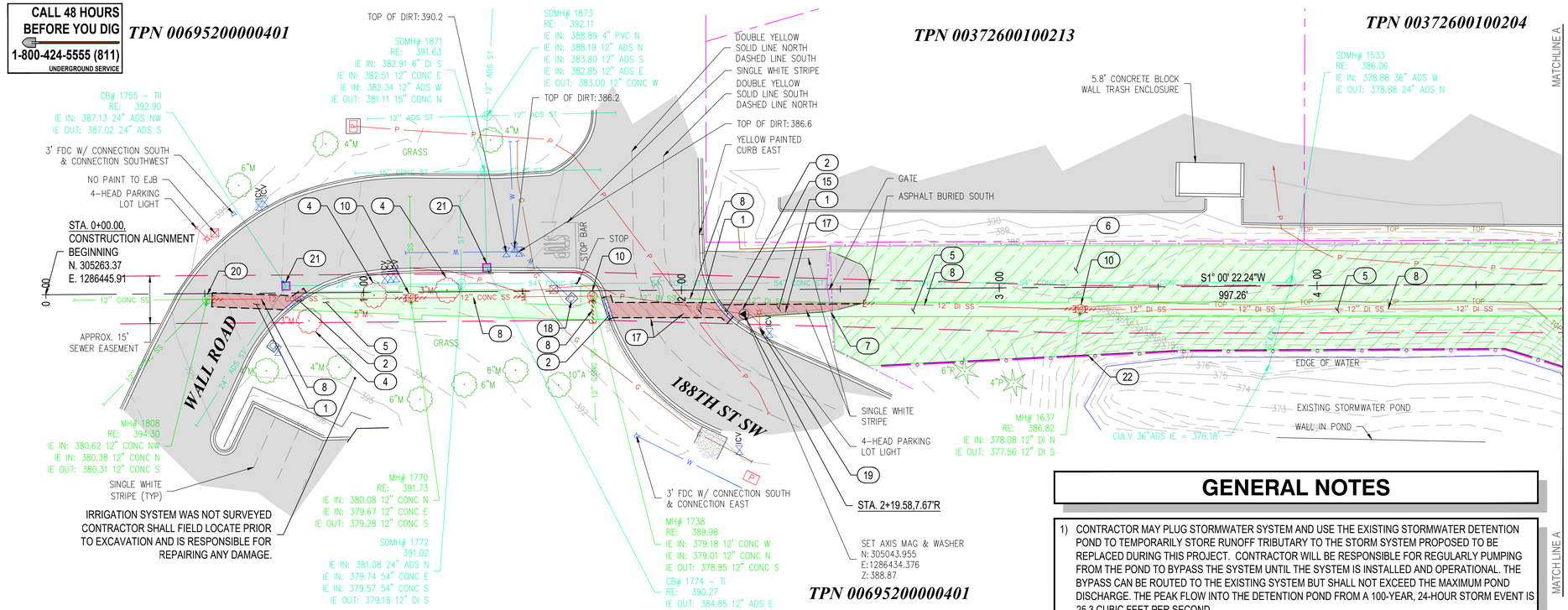


TPN 00372600100305

EXISTING STORM AND SEWER PLAN VIEW I
1" = 20'

EXISTING STORM AND SEWER PLAN VIEW II
1" = 20'

GENERAL NOTES

1) CONTRACTOR MAY PLUG STORMWATER SYSTEM AND USE THE EXISTING STORMWATER DETENTION POND TO TEMPORARILY STORE RUNOFF TRIBUTARY TO THE STORM SYSTEM PROPOSED TO BE REPLACED DURING THIS PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR REGULARLY PUMPING FROM THE POND TO BYPASS THE SYSTEM UNTIL THE SYSTEM IS INSTALLED AND OPERATIONAL. THE BYPASS CAN BE ROUTED TO THE EXISTING SYSTEM BUT SHALL NOT EXCEED THE MAXIMUM POND DISCHARGE. THE PEAK FLOW INTO THE DETENTION POND FROM A 100-YEAR, 24-HOUR STORM EVENT IS 25.3 CUBIC FEET PER SECOND.
2) CONTRACTOR TO SUBMIT BYPASS PUMPING PLAN TO CITY PRIOR TO CONSTRUCTION OF PROPOSED STORM AND SEWER.
3) FOR WORK NORTH OF STA 2+50 CONTRACTOR ACCESS TO MALL PROPERTY SHALL BE LIMITED THROUGH LS8 SITE , STORM AND SEWER EASEMENT AND POND PROPERTY. CONTRACTOR SHALL NOT ACCESS THROUGH MALL. ALL WORK NORTH OF STA 2+50 SHALL BE COMPLETED WITHIN THE PERMANENT EASEMENT EXTENTS SHOWN. CONTRACTOR SHALL MAKE ANY/ALL AGREEMENTS TO USE THE AREA OUTSIDE OF THE PERMANENT EASEMENT AT CONTRACTOR'S DISCRETION.

DEMOLITION NOTES

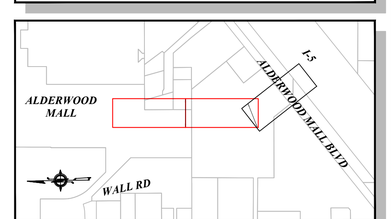
1. SAWCUT AND REMOVE EXISTING ASPHALT TO SUBGRADE.
2. REMOVE EXISTING CONCRETE TO SUBGRADE AND TO NEAREST JOINT.
3. REMOVE GRAVEL TO NATIVE SOIL OR AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
4. REMOVE AND PROPERLY DISPOSE OF TREE AND ROOT BALL. REMOVE ROOTS AND OTHER ORGANICS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
5. REMOVE AND PROPERLY DISPOSE OF EXISTING VEGETATION.
6. CLEAR AND GRUB ALL INVASIVE WEEDS AND PLANTS ALONG FENCE LINE AND POND SLOPE.
7. REMOVE AND REPLACE EXISTING CHAINLINK FENCE AND GATE.
8. REMOVE EXISTING GRAVITY SEWER MAIN AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
9. REMOVE EXISTING GRAVITY STORM MAIN AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
10. REMOVE EXISTING MANHOLE OR CATCHBASIN.
11. EXISTING WATER MAIN ASSUMED TO BE ABANDONED. VERIFY LOCATION AND NOTIFY CITY OF ANY CONFLICTS WITH THE PROPOSED IMPROVEMENTS PRIOR TO REMOVAL. CUT AND PLUG WITH GROUT AS NEEDED.
12. ABANDON EXISTING MANHOLES PER STANDARD SPECIFICATION SECTION 7-05.3(2)
13. ABANDON EXISTING SEWER GRAVITY MAIN PER DETAIL ON DWG NO. C13.
14. ABANDON EXISTING STORM MAIN. FILL EXISTING PIPE TO BE ABANDONED WITH GROUT PER THE SPECIAL PROVISIONS.
15. REMOVE AND PROVIDE NEW MONUMENT PER DETAIL ON C12. MONUMENT SHALL BE INSTALLED BY PLS LICENSED IN WASHINGTON
16. EXISTING STORM MAIN IS ASSUMED TO BE ABANDONED. NOTIFY CITY IF STORM PIPE IS IN CONFLICT WITH PROPOSED IMPROVEMENTS.
17. REPLACE PAINT MARKINGS MATCHING EXISTING.
18. DO NOT DISTURB EXISTING HYDRANT.
19. DO NOT DISTURB EXISTING LIGHT.
20. DO NOT DISTURB EXISTING MANHOLE.
21. PROVIDE INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
22. PROVIDE SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.

*ALL MATERIALS SHALL BE PROPERLY DISPOSED OF AT A CONTRACTOR-PROVIDED DISPOSAL SITE PER WSDOT SPECIFICATION SECTION 2-03.3(7)C

TRAFFIC CONTROL NOTES

WORK PERFORMED FROM STATION 0+00 TO 3+00 SHALL BE NIGHT WORK LIMITED TO THE HOURS OF 8 PM TO 5 AM. AT THE END OF WORKING HOURS THE TRENCH SHALL BE PATCHED WITH COLD MIX ASPHALT OR COVERED WITH STEEL PLATES AND VEHICULAR ACCESS RETURNED TO THE MALL. EITHER WALL ROAD OR 188TH ST SW SHALL ALLOW EAST/WEST TRAFFIC MOVEMENTS AND EMERGENCY ACCESS AT ALL TIMES. DURING CONSTRUCTION ONE OF THE ROUTES SHALL REMAIN OPEN AT ALL TIMES FOR EMERGENCY ACCESS. LOCAL POLICE AND FIRE DEPARTMENTS SHALL BE NOTIFIED AT LEAST 48-HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES.

VICINITY MAP



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38889
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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STORM & SEWER EXISTING SITE AND DEMOLITION PLAN I

LYNNWOOD WASHINGTON

REVISIONS			
NO.	DATE	DESCRIPTION	BY
		ISSUED FOR BIDDING	CMP
			RJF
	03/27/19		REVIEW

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-UTILPREP.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 27, 2019
ENGINEER: CMP
REVIEWED: RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C01
SHEET NO.: 03 48

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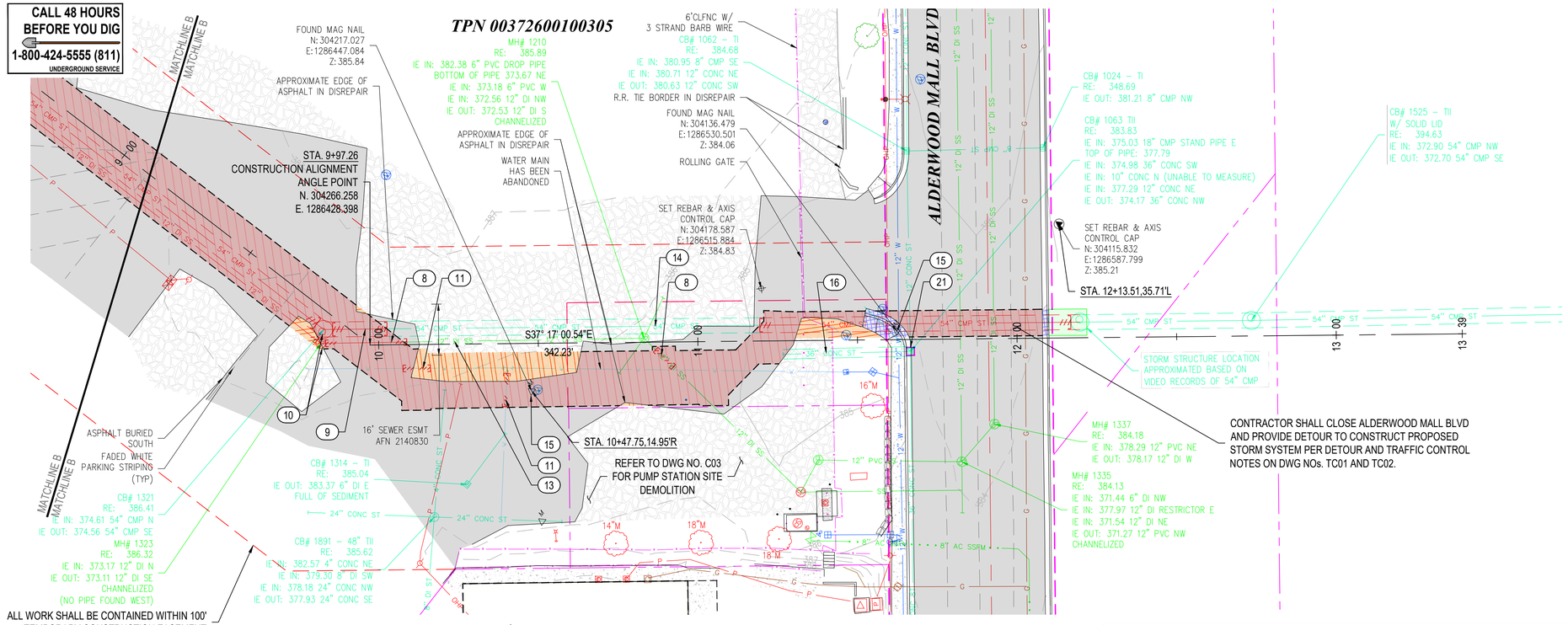

EXISTING STORM AND SEWER PLAN VIEW III

1" = 20'

GENERAL NOTES

1) CONTRACTOR MAY PLUG STORMWATER SYSTEM AND USE THE EXISTING STORMWATER DETENTION POND TO TEMPORARILY STORE RUNOFF TRIBUTARY TO THE STORM SYSTEM PROPOSED TO BE REPLACED DURING THIS PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR REGULARLY PUMPING FROM THE POND TO BYPASS THE SYSTEM UNTIL THE SYSTEM IS INSTALLED AND OPERATIONAL. THE BYPASS CAN BE ROUTED TO THE EXISTING SYSTEM BUT SHALL NOT EXCEED THE MAXIMUM POND DISCHARGE. THE PEAK FLOW INTO THE DETENTION POND FROM A 100-YEAR, 24-HOUR STORM EVENT IS 25.3 CUBIC FEET PER SECOND.
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DEMOLITION NOTES

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2. REMOVE EXISTING CONCRETE TO SUBGRADE AND TO NEAREST JOINT.
3. REMOVE GRAVEL TO NATIVE SOIL OR AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
4. REMOVE AND PROPERLY DISPOSE OF TREE AND ROOT BALL. REMOVE ROOTS AND OTHER ORGANICS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
5. REMOVE AND PROPERLY DISPOSE OF EXISTING VEGETATION.
6. CLEAR AND GRUB ALL INVASIVE WEEDS AND PLANTS ALONG FENCE LINE AND POND SLOPE.
7. REMOVE AND REPLACE EXISTING CHAINLINK FENCE AND GATE.
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11. EXISTING WATER MAIN ASSUMED TO BE ABANDONED. VERIFY LOCATION AND NOTIFY CITY OF ANY CONFLICTS WITH THE PROPOSED IMPROVEMENTS PRIOR TO REMOVAL. CUT AND PLUG WITH GROUT AS NEEDED.
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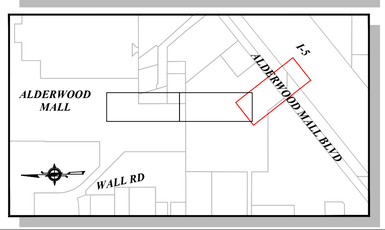
17. REPLACE PAINT MARKINGS MATCHING EXISTING.
18. DO NOT DISTURB EXISTING HYDRANT.
19. DO NOT DISTURB EXISTING LIGHT.
20. DO NOT DISTURB EXISTING MANHOLE.
21. PROVIDE INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00.
22. PROVIDE SILT FENCE PER WSDOT STANDARD PLAN I-30.15-02.

*ALL MATERIALS SHALL BE PROPERLY DISPOSED OF AT A CONTRACTOR-PROVIDED DISPOSAL SITE PER WSDOT SPECIFICATION SECTION 2-03.3(7)C

VICINITY MAP



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SIGNED: 03/27/19

EDWIN HALLMARK — STATE OF WASHINGTON — 38889 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STORM & SEWER EXISTING SITE AND DEMOLITION PLAN II

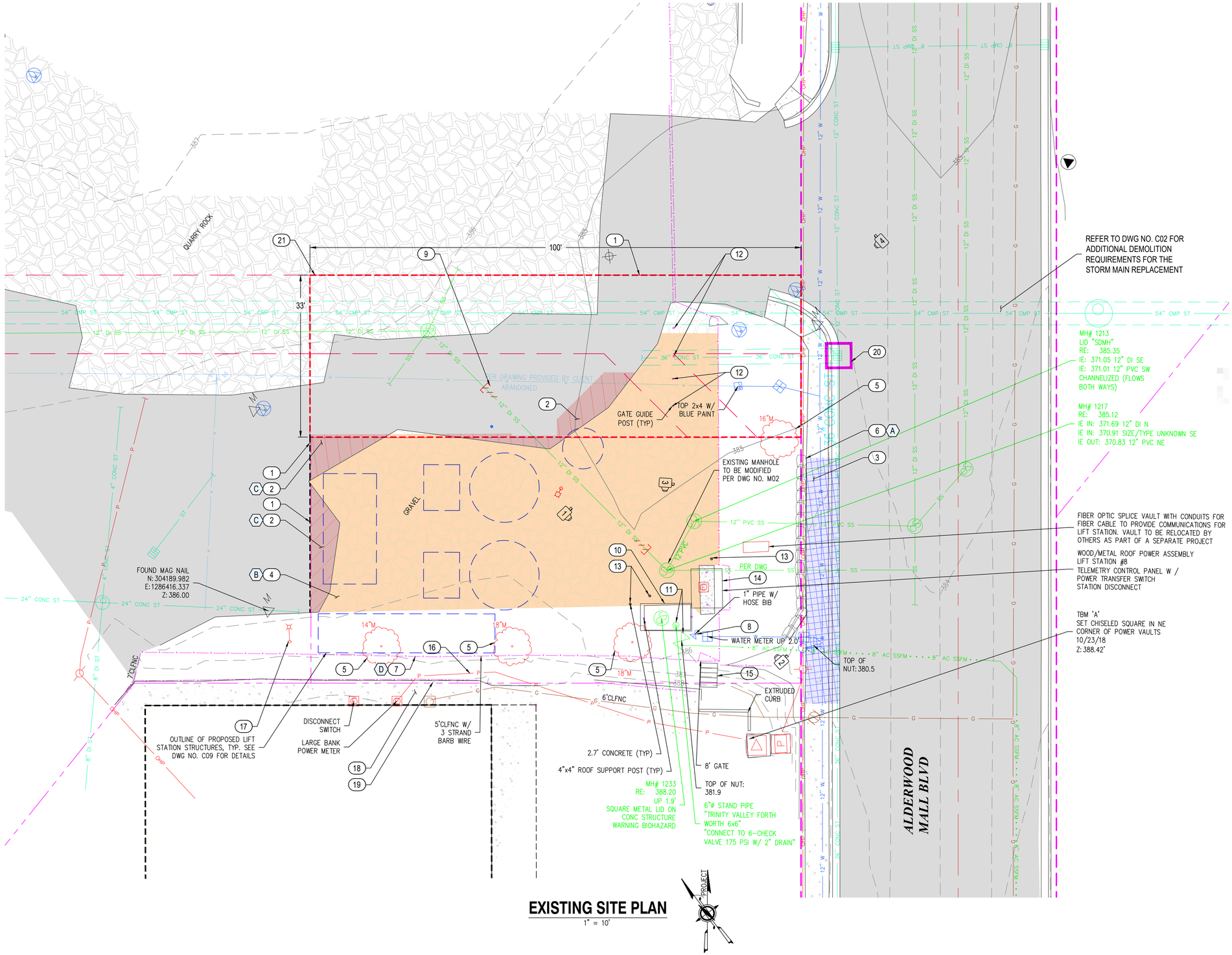
LYNNWOOD WASHINGTON

REVISIONS				
NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

ENGINEER: CMP
REVIEWED: RJF
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 27, 2019
CLIENT: LYNN
FILENAME: LS8LD-UTILPREP.DWG
JOB NO.: 117-098

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C02
SHEET NO.: 04
48



EXISTING SITE PLAN
1" = 10'

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DEMOLITION NOTES

1. SAWCUT EXISTING ASPHALT.
2. REMOVE EXISTING ASPHALT TO SUBGRADE.
3. REMOVE EXISTING CONCRETE TO SUBGRADE AND TO NEAREST JOINT.
4. REMOVE GRAVEL TO NATIVE SOIL OR AS NECESSARY TO MEET ELEVATIONS ON DWG NO. C10.
5. REMOVE AND PROPERLY DISPOSE OF TREE AND ROOT BALL. REMOVE ROOTS AND OTHER ORGANICS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
6. REMOVE AND PROPERLY DISPOSE OF EXISTING RETAINING WALL.
7. REMOVE AND PROPERLY DISPOSE OF EXISTING CHAIN LINK FENCE.
8. EXISTING YARD HYDRANT AND APPURTENANCES TO BE REMOVED. REMOVE METER AND SERVICE LINE TO WATER MAIN AND ABANDON EXISTING CORP STOP.
9. REMOVE AND PROPERLY DISPOSE OF EXISTING GRAVITY SEWER MAIN. MAIN SHALL BE LEFT IN SERVICE UNTIL NEW GRAVITY SEWER INSTALLATION.
10. EXISTING LIFT STATION TO BE DECOMMISSIONED.
11. REFER TO DWG NO. C04 FOR ADDITIONAL DETAILS ON LIFT STATION DEMOLITION AND ABANDONMENT. ANY FITTINGS REMOVED SHALL BE PROPERLY DISPOSED OF.
12. REMOVE AND PROPERLY DISPOSE OF EXISTING POSTS.
13. REMOVE AND PROPERLY DISPOSE OF EXISTING BOLLARDS.
14. REMOVE EXISTING ROOF, CONCRETE PAD AND ELECTRICAL EQUIPMENT. RETURN ELECTRICAL AND ELECTRONIC EQUIPMENT TO CITY.
15. REMOVE AND PROPERLY DISPOSE OF EXISTING STAIRCASE.
16. DO NOT DISTURB EXISTING POWER.
17. DO NOT DISTURB EXISTING LIGHT. CONDUITS FOR LIGHT WERE NOT FOUND. FIELD LOCATE ON LS8 SITE PRIOR TO EXCAVATION. CONTRACTOR TO NOTIFY CITY OF ANY CONFLICTS ONCE LOCATED.
18. DO NOT DISTURB EXISTING SIDEWALK.
19. DO NOT DISTURB EXISTING FENCE.
20. PROVIDE INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20-00
21. CONSTRUCTION STAGING AREA.

*ALL MATERIALS SHALL BE PROPERLY DISPOSED OF AT A CONTRACTOR-PROVIDED DISPOSAL SITE PER WSDOT SPECIFICATION SECTION 2-03.3(7)C

NOTES

- REFER TO DWG NO. C04 FOR CAMERA SHOT LOCATIONS.
- CONTRACTOR IS RESPONSIBLE FOR BUOYANCY CONTROL DURING LIFT STATION ABANDONMENT AND DEMOLITION.
- PROVIDE TRAFFIC CONTROL AS NECESSARY FOR DEMOLITION AND CONSTRUCTION OF THE PROPOSED DRIVEWAY ENTRANCE. TRAFFIC CONTROL SHALL BE LIMITED TO A SINGLE LANE CLOSURE. LANE CLOSURE SHALL BE PER CITY OF LYNNWOOD STANDARD DETAIL STD7-4 ON DWG NO. TC02.
- THE EXISTING LIFT STATION SHALL BE ACCESSIBLE BY CITY CREWS AND A CITY VACTOR TRUCK AT ALL TIMES FOR THE DURATION OF CONSTRUCTION.

KEY NOTES

- (A) APPROX. 40 LF OF EXISTING ROCK RETAINING WALL TO BE REMOVED.
- (B) APPROX. 3,090 SF OF EXISTING GRAVEL TO BE REMOVED.
- (C) APPROX. 75 SF OF EXISTING ASPHALT TO BE REMOVED.
- (D) APPROX. 224 LF OF EXISTING FENCING TO BE REMOVED.

*NOTE: QUANTITIES DO NOT INCLUDE REMOVAL FOR STORM AND SEWER REPLACEMENT.

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SIGNED: 03/27/19

RYAN J. PEDERSEN — STATE OF WASHINGTON — 49451 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS

LYNNWOOD WASHINGTON

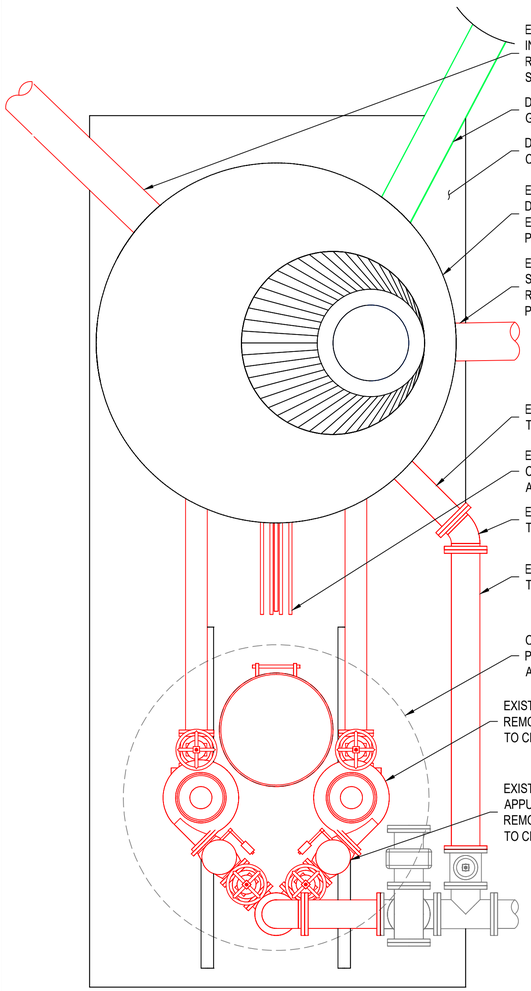
EXISTING SITE & DEMOLITION PLAN

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	CMP
			RJF

JOB NO.: 117-088
CLSR': LYNN
FILENAME: LS8-D-CIV01.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: CMP
REVIEWED: RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C03
SHEET NO.: 05
48

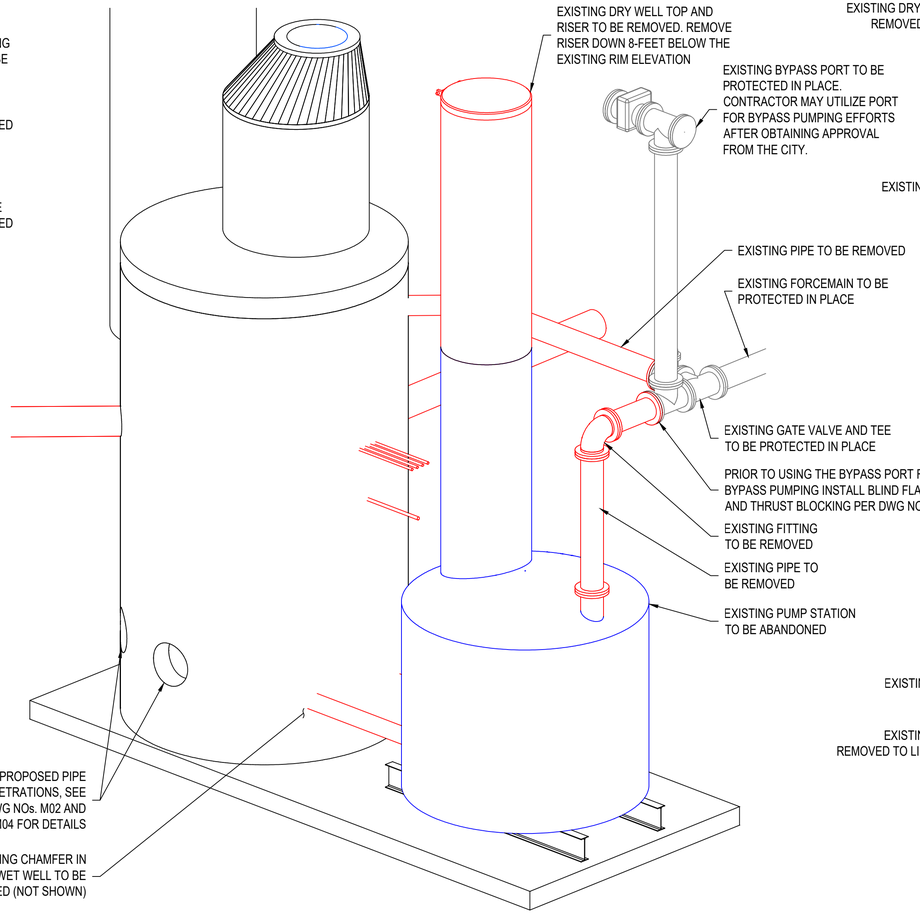


EXISTING LIFT STATION DEMOLITION PLAN

NOT TO SCALE

EXISTING PUMP STATION REMOVAL AND ABANDONMENT NOTES:

1. NOT ALL EQUIPMENT, PIPING, AND OTHER APPURTENANCES ARE SHOWN IN THIS VIEW.
2. REMOVE ALL PUMPS, PIPES, FITTINGS, ELECTRICAL AND TELEMETRY EQUIPMENT, LADDERS, FANS AND ALL OTHER APPURTENANCES FROM INSIDE THE PUMP STATION. THE EXISTING PUMP STATION RISER ACCESS SHALL BE REMOVED AND THE PUMP STATION COMPLETELY FILLED WITH SAND SLURRY OR CDF.
3. DELIVER REMOVED PUMPS, MOTORS, AND GATE VALVES TO CITY SHOPS. OTHER ITEMS SHALL BE PROPERLY DISPOSED.
4. ALL MATERIALS SHALL BE PROPERLY DISPOSED OF AT A CONTRACTOR-PROVIDED DISPOSAL SITE PER WSDOT SPECIFICATION SECTION 2-03.3(7)C



EXISTING LIFT STATION OBLIQUE

NOT TO SCALE

1 **EXISTING SITE PHOTO**

2 **EXISTING SITE PHOTO**

3 **EXISTING SITE PHOTO**

4 **EXISTING SITE PHOTO**

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

EXISTING LIFT STATION DEMOLITION PLAN AND PHOTOS

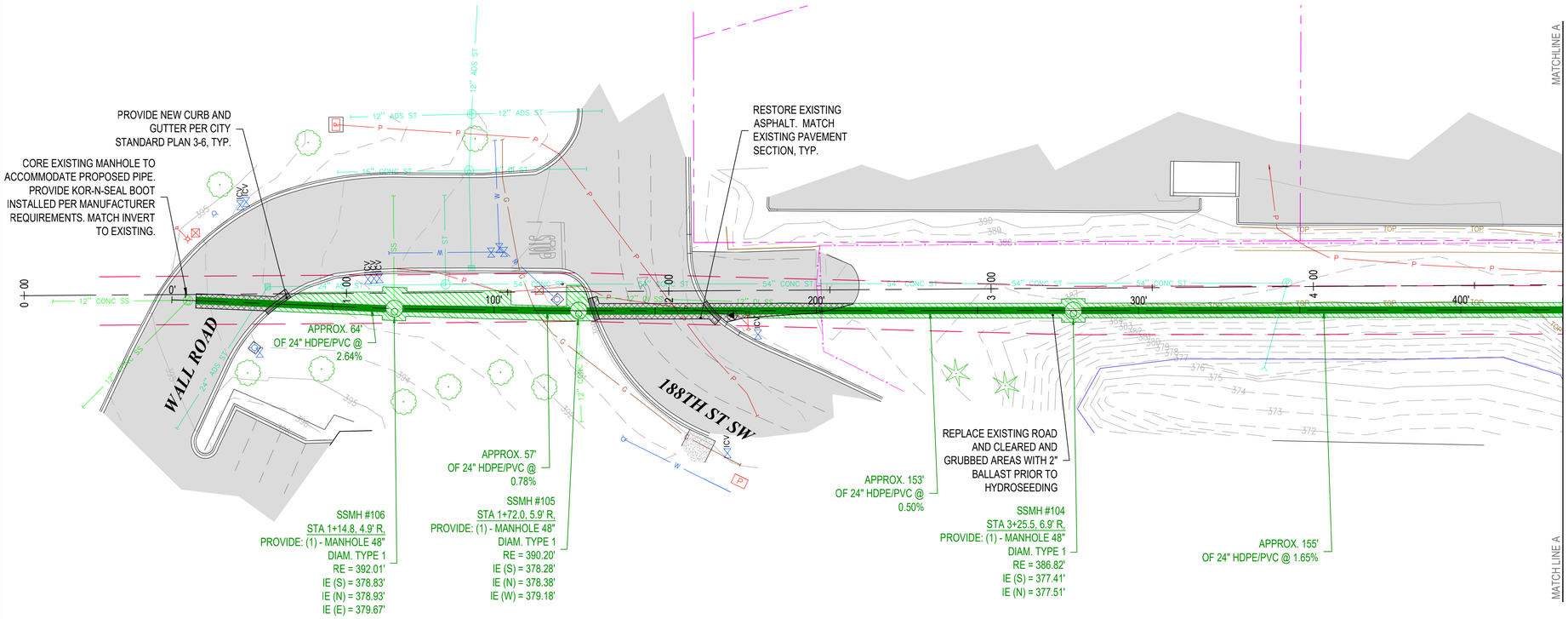
ENGINEER: OMP
REVIEWED: RJF
DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-CIV01.DWG
JOB NO.: 117-098

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	OMP	RJF

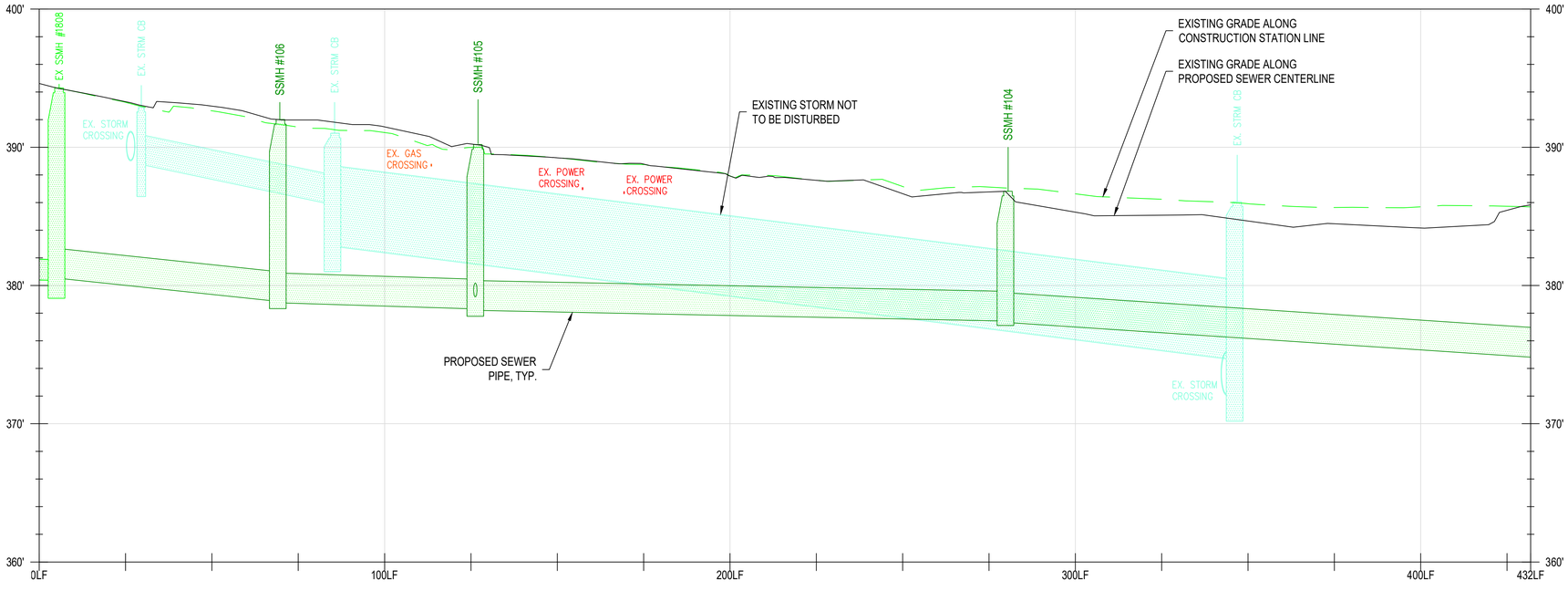
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C04
SHEET NO.: 06
48



EXISTING STORM AND SEWER PLAN VIEW I

1" = 20'



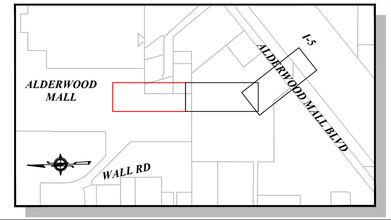
SEWER CENTERLINE PROFILE I

H: 1" = 20', V: 1" = 5'

GENERAL NOTES

1) EXISTING UTILITIES HAVE NOT BEEN POTHOLED TO IDENTIFY LOCATION, MATERIAL, SIZE OR GEOMETRY.
2) PIPE SLOPES ARE REFERENCING ACTUAL LAYING SLOPE OF PIPE BETWEEN EDGE OF STRUCTURES. PIPE LENGTHS ARE REFERENCED TO CENTER OF STRUCTURES PER PAYMENT LENGTH.
3) TRENCH SECTION AND PAVEMENT RESTORATION FOR STORM AND SEWER SHALL BE PER LYNNWOOD STANDARD PLANS ON DWG NO. C11 AND C12.
4) STORM PIPE MATERIAL SHALL BE PER SPECIFICATIONS SECTION 7-04.
5) SEWER CONNECTIONS TO THE PROPOSED MANHOLES SHALL BE PER DETAIL ON DWG NO. C13. (101 / C13)
6) IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE FOR SEWER, PIPE BLOCKING SHALL BE ADDED TO EACH MANHOLE STRUCTURES FOR EACH PIPE PENETRATION, SEE DETAILS ON DWG NO. S01
7) REFER TO SPECIAL PROVISIONS 7-08.3(1)D REGARDING POTHOLING AT UTILITY CROSSINGS A SUFFICIENT DISTANCE AHEAD OF PIPE-LAYING.

VICINITY MAP



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SIGNED: 03/27/19

EDWIN HALLMARK — STATE OF WASHINGTON — 38889 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STORM & SEWER PLAN AND PROFILE I

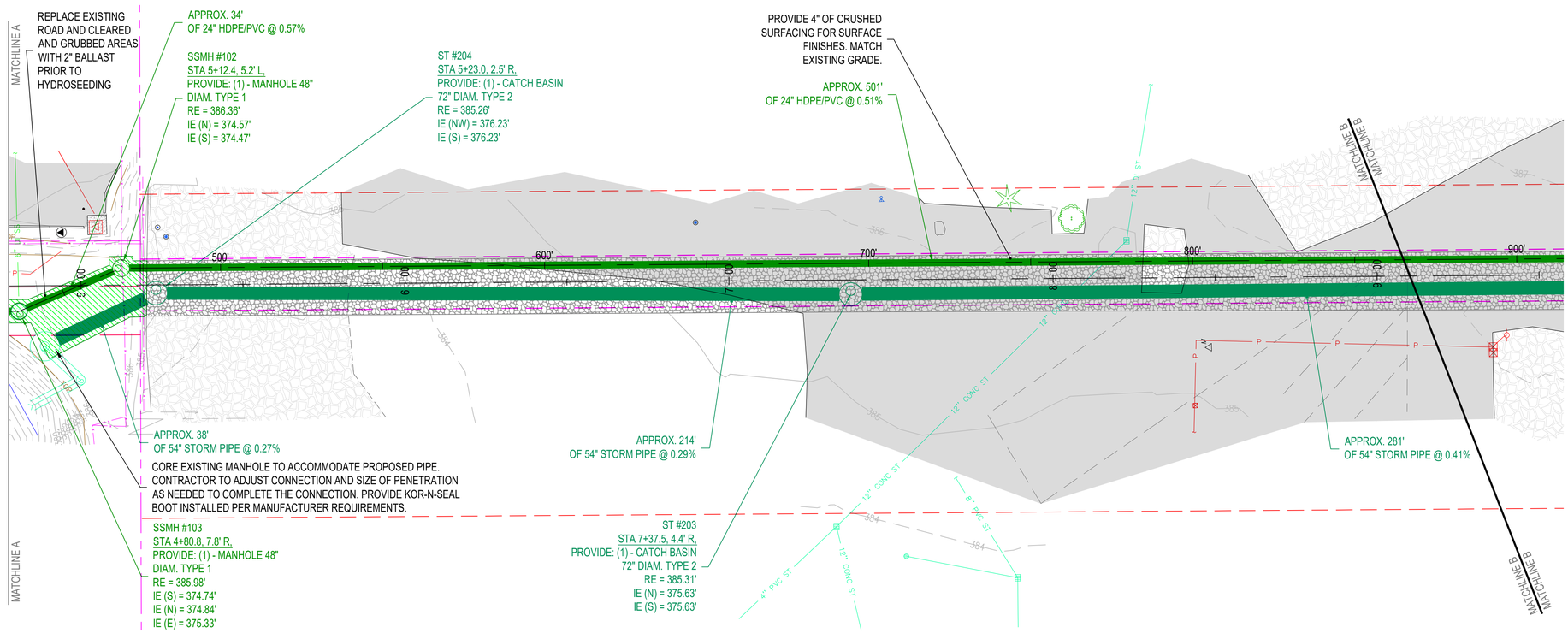
LYNNWOOD WASHINGTON

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	RJF

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-UTILP.DWG
DATE: Mar 26, 2019
PLOT DATE: Mar 27, 2019
ENGINEER: CMP
REVIEWED: RJF
OMP

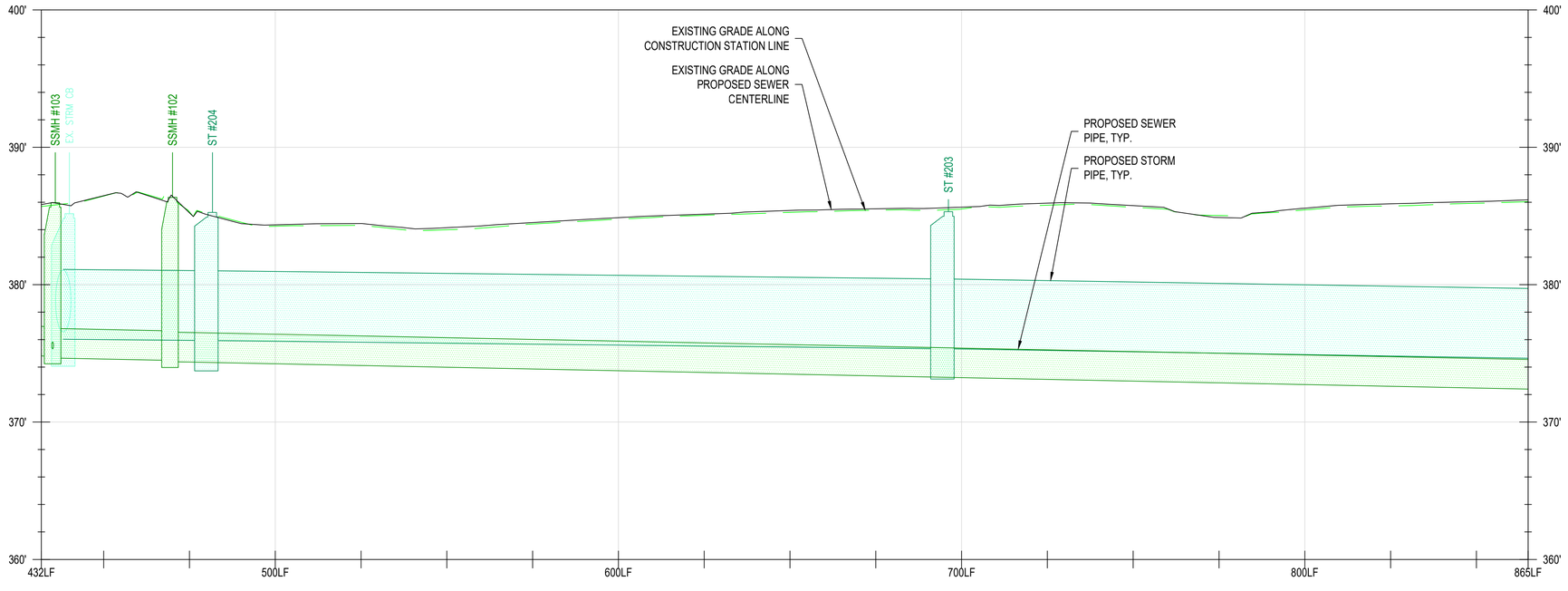
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C05
SHEET NO.: 07
48



EXISTING STORM AND SEWER PLAN VIEW II

1" = 20'



SEWER CENTERLINE PROFILE II

H: 1" = 20', V: 1" = 5'

GENERAL NOTES

1) EXISTING UTILITIES HAVE NOT BEEN POTHOLED TO IDENTIFY LOCATION, MATERIAL, SIZE OR GEOMETRY.
2) PIPE SLOPES ARE REFERENCING ACTUAL LAYING SLOPE OF PIPE BETWEEN EDGE OF STRUCTURES. PIPE LENGTHS ARE REFERENCED TO CENTER OF STRUCTURES PER PAYMENT LENGTH.
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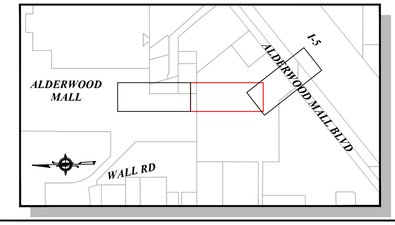
7) REFER TO SPECIAL PROVISIONS 7-08.3(1)D REGARDING POTHOLING AT UTILITY CROSSINGS A SUFFICIENT DISTANCE AHEAD OF PIPE-LAYING.

VICINITY MAP



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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STORM & SEWER PLAN AND PROFILE II

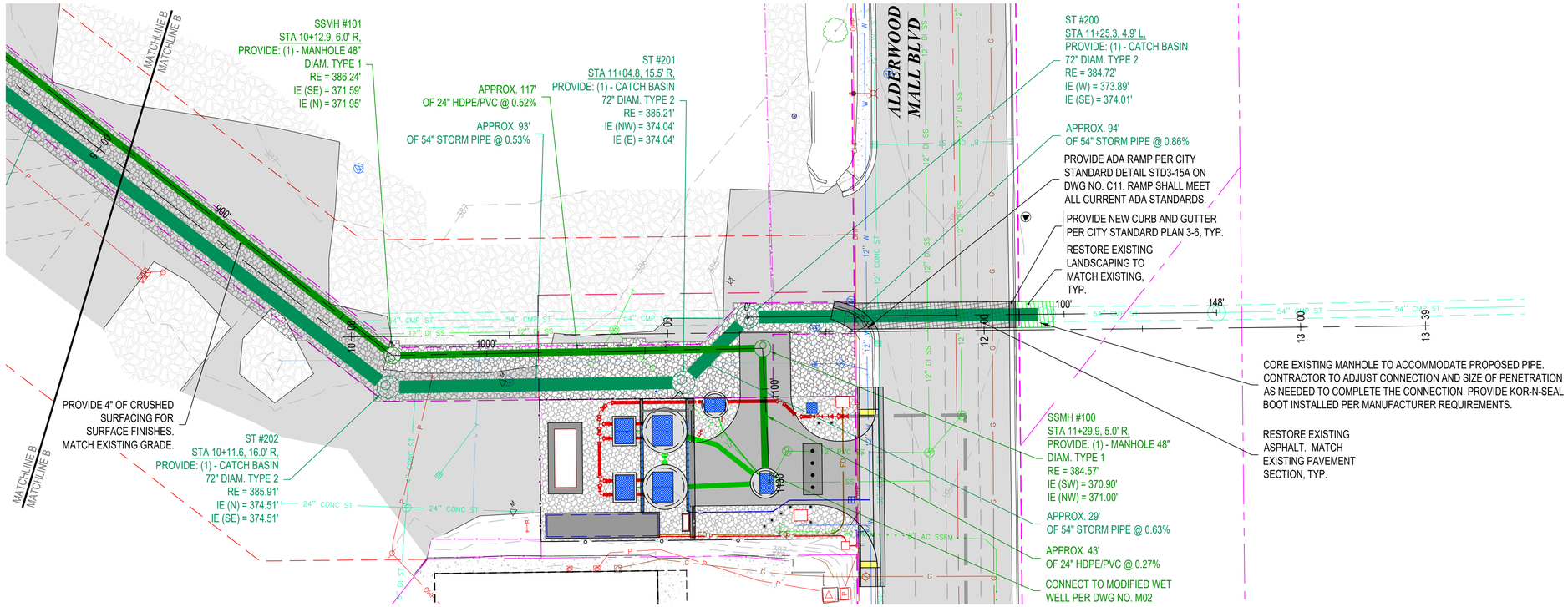
LYNNWOOD WASHINGTON

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	RJF

ENGINEER: OMP
REVIEWED: RJF
DATE: Mar 26, 2019
PLOT DATE: Mar 27, 2019
CLIENT: LYNN
FILENAME: LS8-D-UTILP.DWG
JOB NO.: 117-088

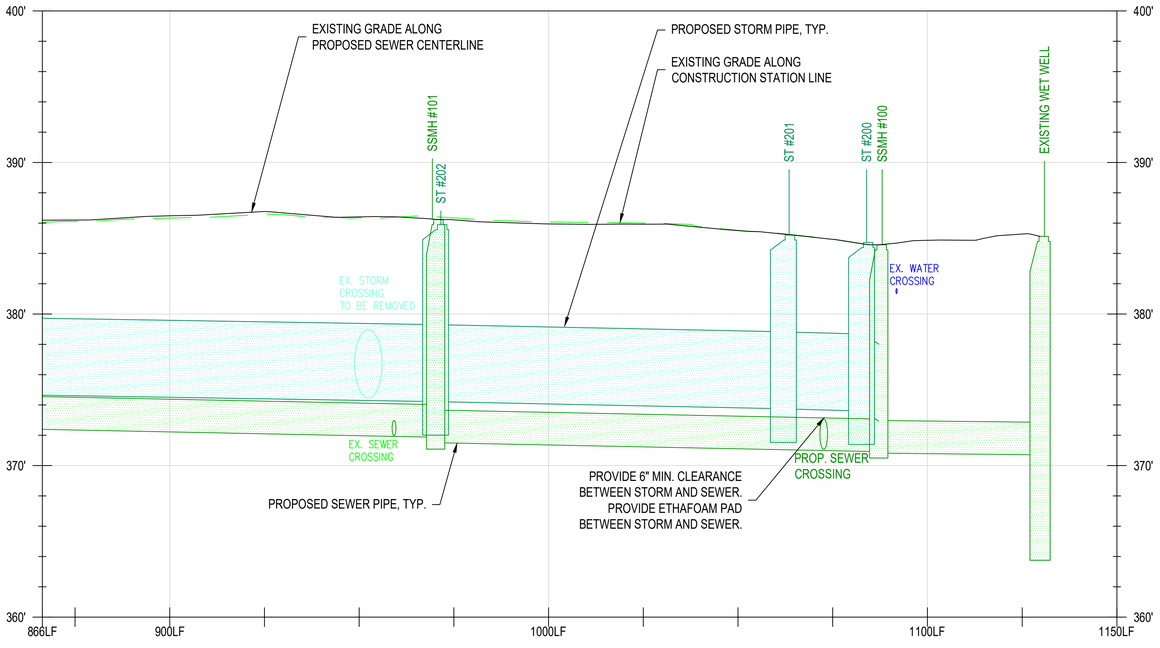
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C06
SHEET NO.: 08 48



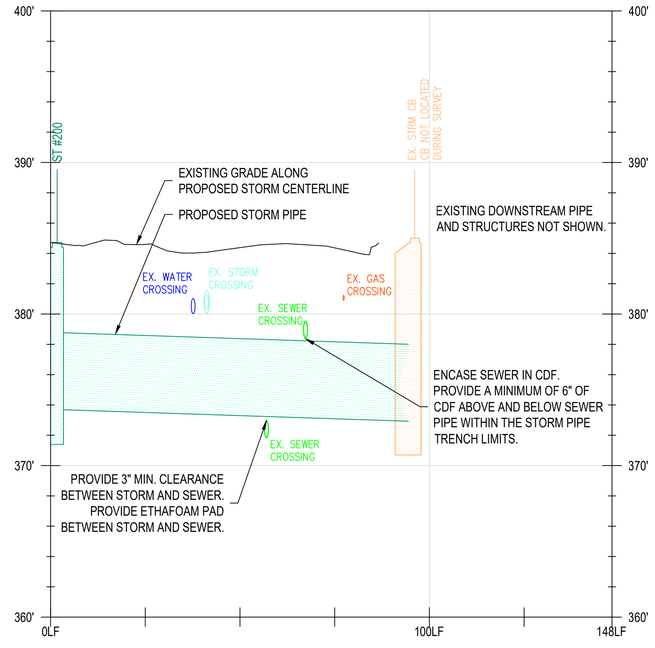
EXISTING STORM AND SEWER PLAN VIEW III

1" = 20'



SEWER CENTERLINE PROFILE III

H: 1" = 20', V: 1" = 5'



STORM CENTERLINE PROFILE

H: 1" = 20', V: 1" = 5'

GENERAL NOTES

1) EXISTING UTILITIES HAVE NOT BEEN POTHOLED TO IDENTIFY LOCATION, MATERIAL, SIZE OR GEOMETRY.
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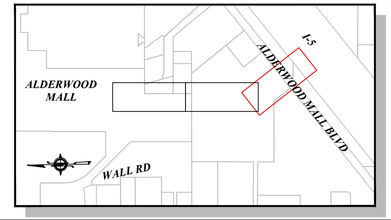
7) REFER TO SPECIAL PROVISIONS 7-08.3(1)D REGARDING POTHOLING AT UTILITY CROSSINGS A SUFFICIENT DISTANCE AHEAD OF PIPE-LAYING.

VICINITY MAP



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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STORM & SEWER PLAN AND PROFILE III

LYNNWOOD WASHINGTON

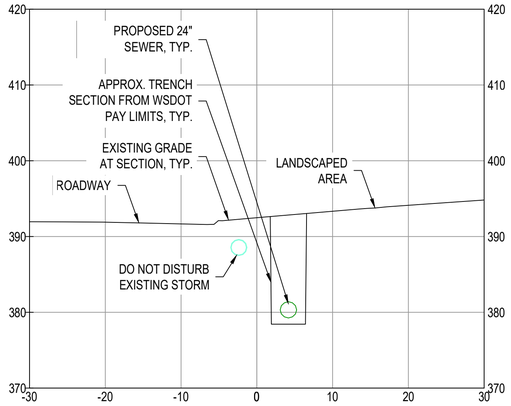
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	OMP
			RJF
			REVIEW

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-UTILP.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 27, 2019
ENGINEER: OMP
REVIEWED: RJF

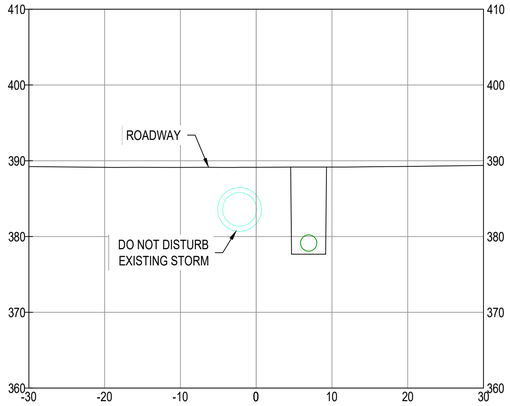
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C07
SHEET NO.: 09

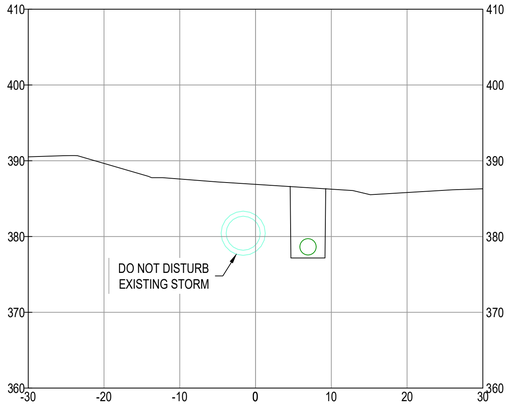
1+00 SECTION



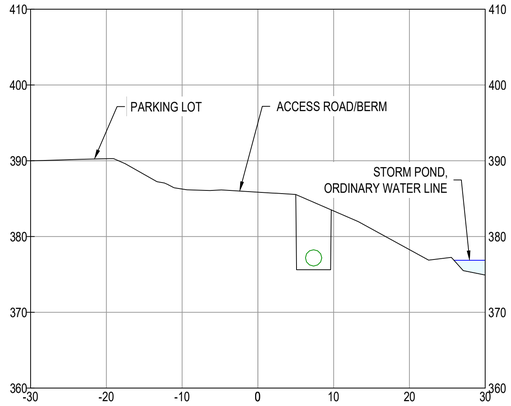
2+00 SECTION



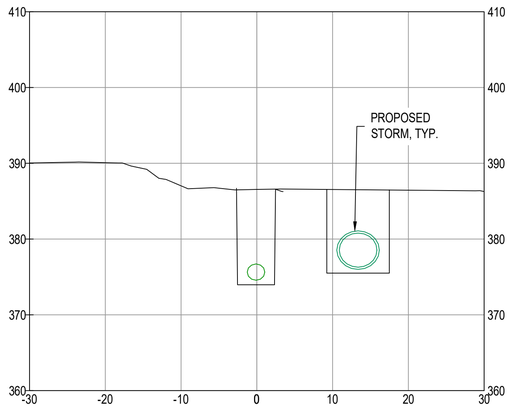
3+00 SECTION



4+00 SECTION



5+00 SECTION



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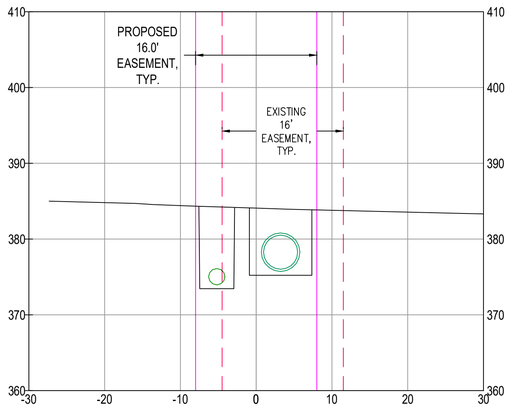
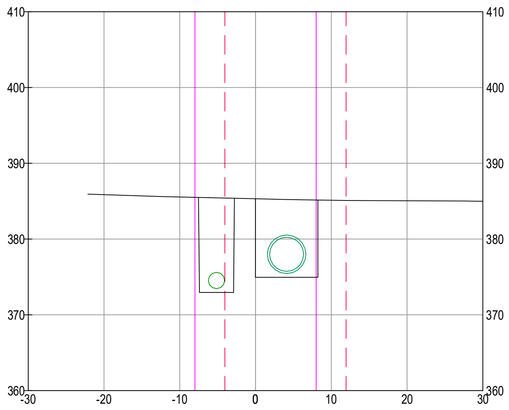
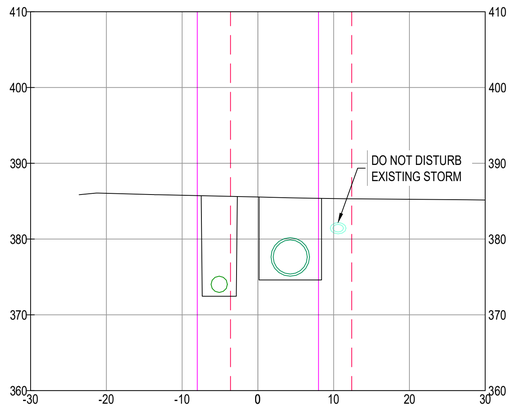


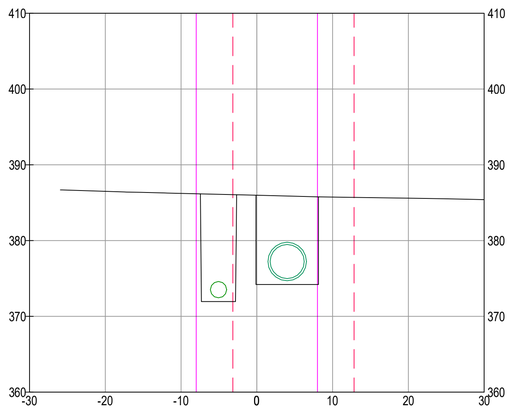
7+00 SECTION



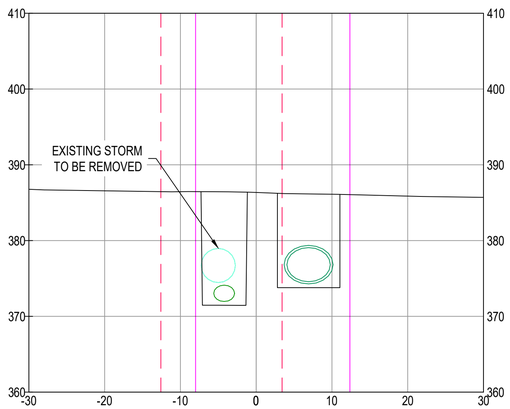
8+00 SECTION



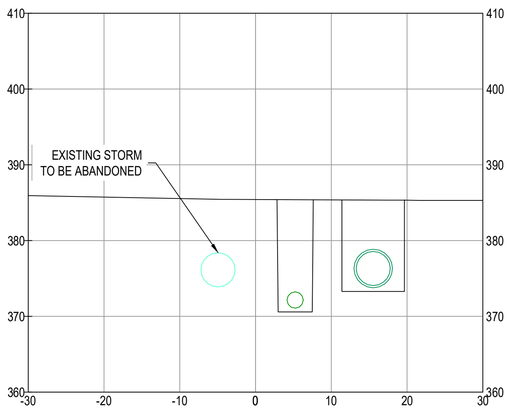
9+00 SECTION



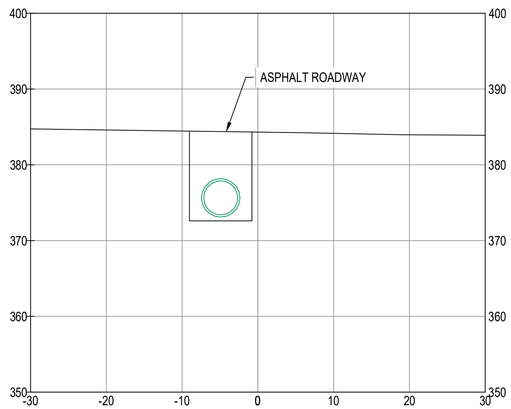
10+00 SECTION



11+00 SECTION



12+00 SECTION



SECTION VIEWS

H: 1" = 10', V: 1" = 10'

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

STORM & SEWER SECTIONS

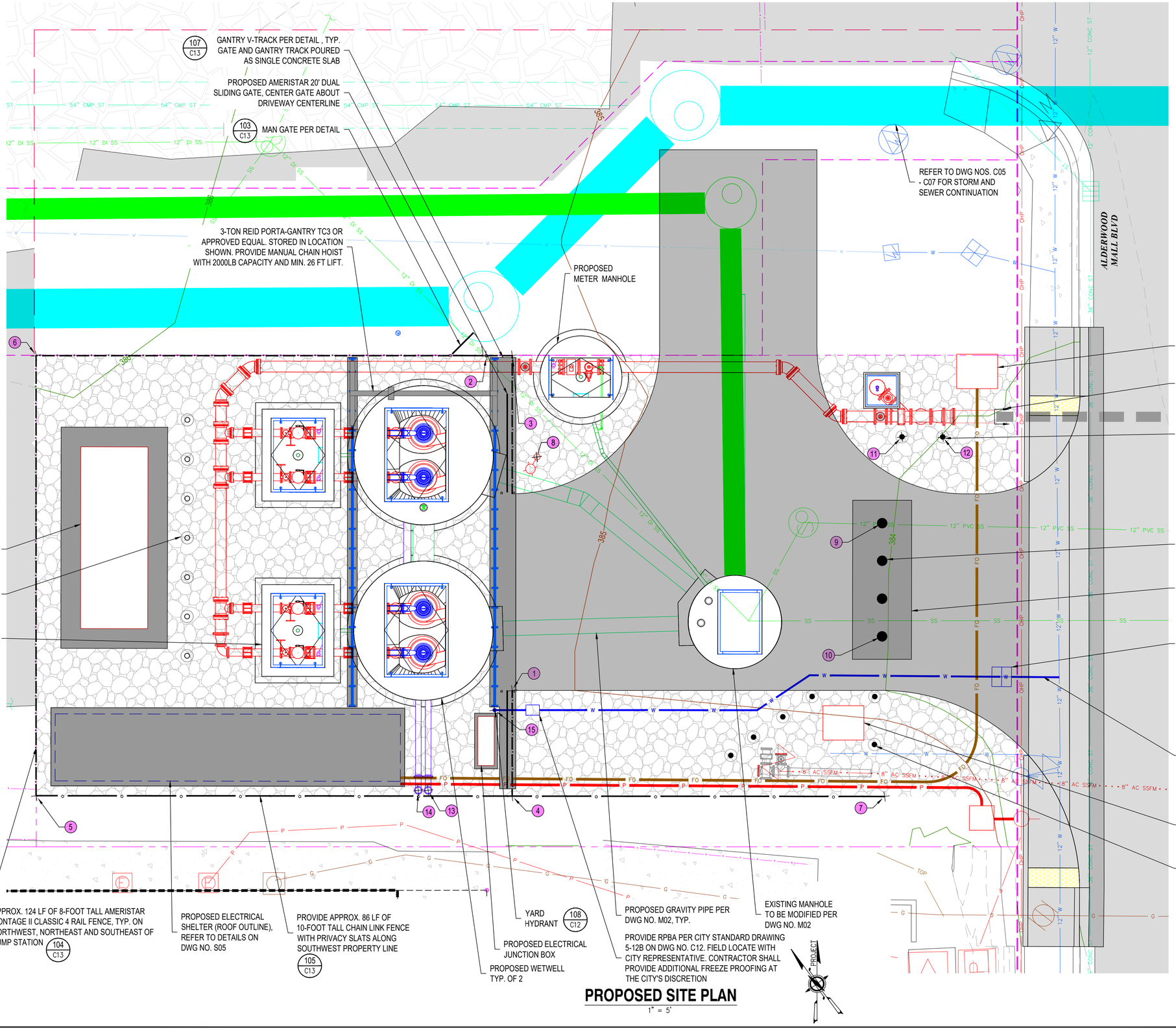
JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-UTLP.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: OMP
REVIEWED: RJF

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C08
SHEET NO.: 10
48



PROPOSED SITE PLAN

1" = 5'

POINT TABLE			
POINT NO.	NORTHING	EASTING	DESCRIPTION
1	304145.31	1286451.90	GATE POST
2	304168.04	1286477.40	MAN GATE POST
3	304165.96	1286478.99	FENCE CORNER
4	304138.80	1286443.35	FENCE CORNER
5	304177.34	1286414.03	FENCE CORNER
6	304204.48	1286449.63	FENCE CORNER
7	304108.64	1286466.29	FENCE CORNER
8	304157.71	1286472.31	SITE LIGHT
9	304125.69	1286488.25	BOLLARD
10	304118.72	1286479.08	BOLLARD
11	304129.41	1286496.45	BOLLARD
12	304126.12	1286498.96	BOLLARD
13	304145.95	1286438.63	WET WELL VENT
14	304146.75	1286438.03	WET WELL VENT
15	304145.52	1286449.23	HOSE BIB

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RYAN J. PEDERSEN — STATE OF WASHINGTON — 49451 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

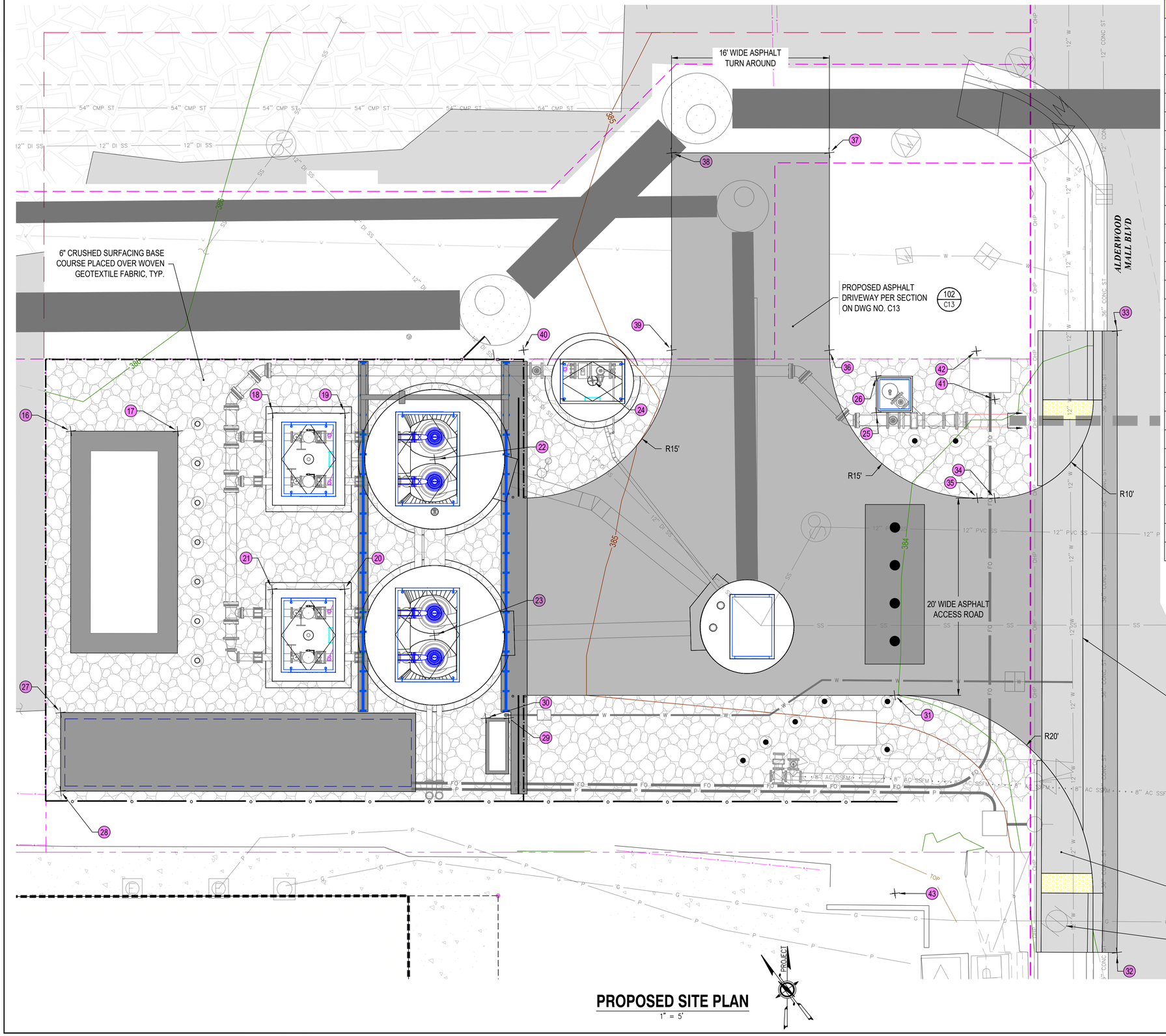
PROPOSED SITE PLAN

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	CMP
			REVIEW
			RJF

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-CV02.DWG
SAVE DATE: Mar 27, 2019
PLOT DATE: Mar 27, 2019
ENGINEER: KRP
REVIEWED: RFJ

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C09
SHEET NO.: 11
48



PROPOSED SITE PLAN

1" = 5'

SITE POINTS

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
16	304198.05	1286445.39	385.65	EG PAD CORNER
17	304189.42	1286451.95	385.65	EG PAD CORNER
18	304182.89	1286459.22	385.50	VALVE VAULT CORNER
19	304177.05	1286463.66	385.50	VALVE VAULT CORNER
20	304166.26	1286449.46	385.50	VALVE VAULT CORNER
21	304172.10	1286445.02	385.50	VALVE VAULT CORNER
22	304166.98	1286465.46	385.50	WETWELL CENTER
23	304156.18	1286451.26	385.50	WETWELL CENTER
24	304159.09	1286481.51	385.39	METER MANHOLE CENTER
25	304134.26	1286496.39	384.44	POLYPIG VAULT CORNER
26	304136.48	1286499.31	384.44	POLYPIG VAULT CORNER
27	304181.57	1286422.06	385.65	ELECTRICAL SHELTER CORNER
28	304176.76	1286415.73	385.65	ELECTRICAL SHELTER CORNER
29	304145.10	1286449.15	385.65	JUNCTION BOX PAD CORNER
30	304146.96	1286447.74	385.65	JUNCTION BOX PAD CORNER
31	304115.39	1286474.70	384.02	PAVING LIMITS
32	304081.66	1286467.61	MATCH EXISTING	PAVING LIMITS
33	304119.86	1286517.74	MATCH EXISTING	PAVING LIMITS
34	304119.45	1286496.75	383.69	PAVING LIMITS
35	304120.85	1286495.68	383.66	PAVING LIMITS
36	304141.87	1286498.52	384.84	PAVING LIMITS
37	304154.00	1286514.43	384.96	PAVING LIMITS
38	304166.72	1286504.73	385.00	PAVING LIMITS
39	304154.60	1286488.83	385.40	PAVING LIMITS
40	304166.53	1286479.74		CENTER POINT
41	304125.51	1286504.71		CENTER POINT
42	304129.96	1286507.48		CENTER POINT
43	304103.20	1286458.74		CENTER POINT

CALL 48 HOURS BEFORE YOU DIG
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RYAN J. FISHMAN — STATE OF WASHINGTON — 49451 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

PROPOSED GRADING PLAN

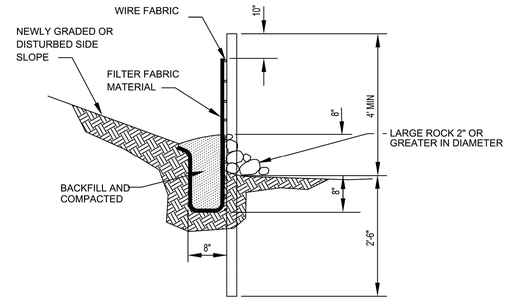
JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-GW03.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: OMP
REVIEWED: RJF

REVISIONS

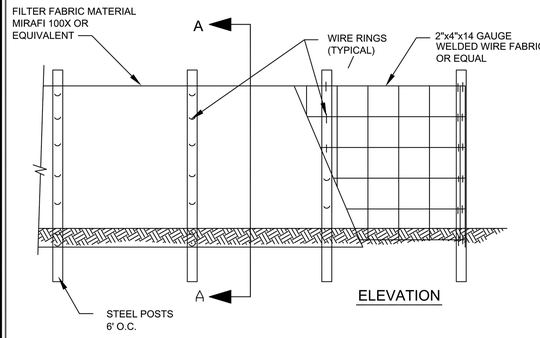
NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C10
SHEET NO.: 12 48



SECTION A-A



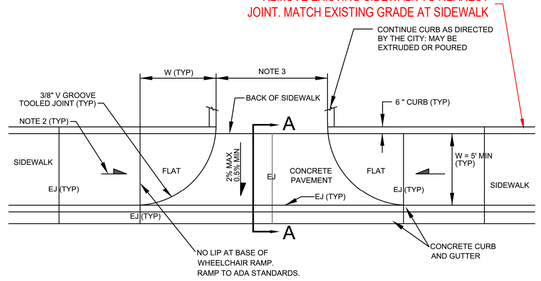
ELEVATION

LYNNWOOD WASHINGTON PUBLIC WORKS

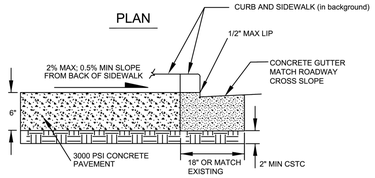
SILT FILE: I:\Standard_Plans

DRAWING NUMBER	STD2-5
SCALE	NONE
REVISION DATE	11/05
DEPARTMENT	PW

REMOVE EXISTING SIDEWALK TO NEAREST JOINT. MATCH EXISTING GRADE AT SIDEWALK



PLAN



SECTION A-A

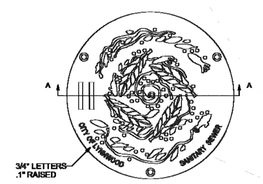
NOTES

1. RAMP TEXTURING SHALL BE A BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL.
2. RAMP LENGTH VARIES (WITH A MINIMUM OF 6') AND SHALL BE CALCULATED BASED ON A RAMP SLOPE (PARALLEL TO THE CURB) WHICH DOES NOT EXCEED 8.3%. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
3. 24' MINIMUM TO 30' MAXIMUM, OR AS APPROVED BY THE CITY.
4. EJ = FULL DEPTH EXPANSION JOINT; 10' MAXIMUM SPACING BETWEEN JOINTS

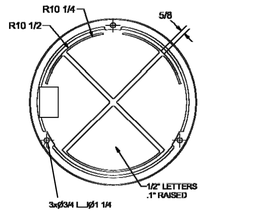
LYNNWOOD WASHINGTON PUBLIC WORKS

5' - 7' COMMERCIAL AT-GRADE DRIVEWAY FILE: I:\Standard_Plans

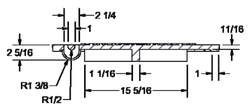
DRAWING NUMBER	STD3-12A
SCALE	NONE
REVISION DATE	04/17
DEPARTMENT	PW



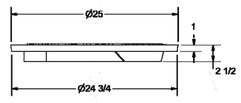
TOP OF COVER



BOTTOM OF COVER



SECTION A-A



SIDE OF COVER

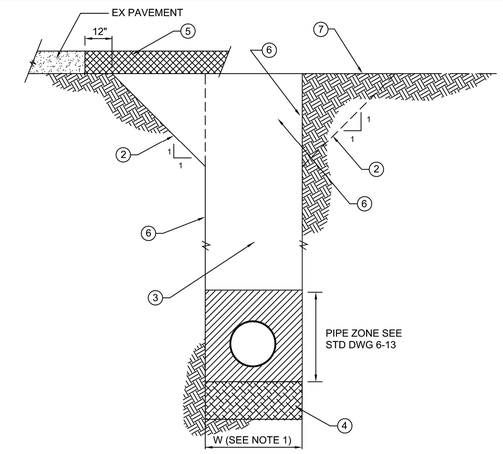
NOTES

1. SEWER MANHOLE COVER SHALL BE EQUAL TO OLYMPIC FOUNDRY MH30 PART NO. 11-2948.
2. THIS DETAIL FOR SEWER MANHOLES IN RIGHT-OF-WAY ONLY. ALL OTHER MANHOLES SHALL ONLY BE MARKED "SEWER".

LYNNWOOD WASHINGTON PUBLIC WORKS

SEWER MANHOLE COVER FILE: I:\Standard_Plans

DRAWING NUMBER	STD6-7
SCALE	NONE
REVISION DATE	06/14
DEPARTMENT	PW



NOTES

1. W = MAXIMUM WIDTH OF TRENCH. FOR PIPES 15" OR LESS IN DIA W=40". FOR PIPES 18" OR GREATER W=1-1/2 x I.D. + 18".
2. ALTERNATE LAID-BACK TRENCH TO MEET O.S.H.A. REQUIREMENTS (NO SLOPES STEEPER THAN 1:1 EXCEPT FOR ROCK).
3. TRENCH BACKFILL MATERIAL SHALL BE 5/8" CSTC OR 1 1/4" CSBC, CDF*, OR APPROVED ALTERNATIVE. SEE 6-17 FOR COMPACTION REQUIREMENTS.

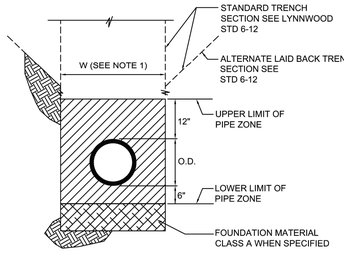
   ALL EXCAVATED MATERIAL TO BE LOADED OUT.

   *CDF SHALL BE DESIGNED TO HAVE A MINIMUM 28-DAY STRENGTH OF 50PSI AND A MAXIMUM 28-DAY STRENGTH NOT TO EXCEED 300PSI. THE CDF CONSISTENCY SHALL BE FLOWABLE (APPROXIMATE SLUMP 3 TO 10 INCHES).
4. FOUNDATION GRAVEL IF REQUIRED BY THE ENGINEER TO REPLACE UNSUITABLE MATIERAL. SHALL BE FOUNDATION MATERIAL CLASS A. WSDOT 9-03.17
5. SEE CITY OF LYNNWOOD STANDARD DWG 3-18 AND 3-18A FOR PAVEMENT
6. VERTICAL TRENCH WALLS WITH SHORING TO CONFORM TO O.S.H.A. REGULATIONS.
7. SUBGRADE OR GROUND SURFACE IN NON-PAVED AREAS.

LYNNWOOD WASHINGTON PUBLIC WORKS

TYPICAL TRENCH SECTION IN RIGHT-OF-WAY FILE: I:\Standard_Plans

DRAWING NUMBER	STD6-12
SCALE	NONE
REVISION DATE	04/14
DEPARTMENT	PW



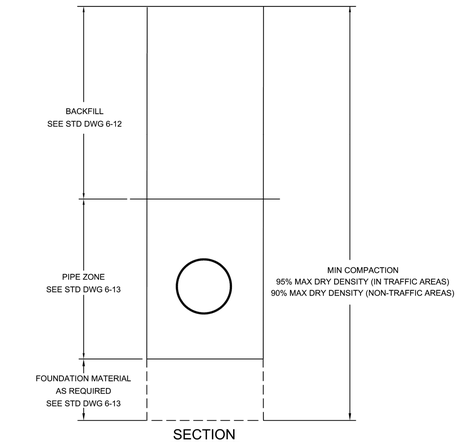
NOTES

1. LIMITS OF TRENCH
   W = MAXIMUM WIDTH OF TRENCH FOR PIPES 15" OR LESS IN DIAMETER W= 40" MINIMUM FOR PIPES 18" OR GREATER IN DIAMETER W= 1 ½ X I.D. + 18".
2. GRAVEL BACKFILL FOR PIPE ZONE BEDDING SHALL CONSIST OF CRUSHED, PROCESSED, OR NATURALLY OCCURRING GRANULAR MATERIAL. IT SHALL BE ESSENTIALLY FREE FROM VARIOUS TYPES OF WOOD WASTE OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS. IT SHALL HAVE SUCH CHARACTERISTICS OF SIZE AND SHAPE THAT IT WILL COMPACT READILY PER WSDOT 9-03.12 (3).
3. PEA GRAVEL, SAND, ⅝" CHIPS, CDF AND ⅝" CSTC MAY BE REQUIRED AT THE DISCRETION OF THE PUBLIC WORKS INSPECTOR.
4. ALL FOUNDATION MATERIAL, IF REQUIRED, SHALL BE FOUNDATION MATERIAL CLASS "A" PER WSDOT SPEC 9-03.17
   REQUIRED COMPACTION PROCEDURES SHALL COMPLY WITH WSDOT SPEC 2-06. SEE LYNNWOOD STD. 6-17 FOR ADDITIONAL INFORMATION.

LYNNWOOD WASHINGTON PUBLIC WORKS

BEDDING FOR PIPE IN TRENCHES FILE: I:\Standard_Plans

DRAWING NUMBER	STD6-13
SCALE	NONE
REVISION DATE	03/14
DEPARTMENT	PW



SECTION

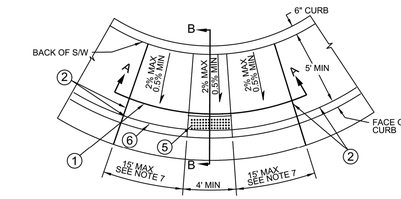
NOTES:

1. ALL BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES BEFORE COMPACTION UNLESS AUTHORIZED BY THE ENGINEER DUE TO THE CHARACTER OF THE MATERIAL AND THE COMPACTING EQUIPMENT.
2. MECHANICAL COMPACTION OF BACKFILL MATERIAL SHALL NOT BEGIN UNTIL THE DEPTH OF COMPACTED BACKFILL MATERIAL IS 2 FEET ABOVE THE TOP OF PIPE.
3. EACH LIFT SHALL BE MECHANICALLY COMPACTED TO THE REQUIRED DENSITY PRIOR TO PLACING SUCCEEDING LIFTS OF BACKFILL MATERIAL.
4. COMPACTION TESTS SHALL BE AS REQUIRED BY THE CITY ENGINEER, BUT IN NO CASE LESS THAN 2 TESTS EVERY 200 FEET OF TRENCH (ONE AT SUBGRADE AND ONE AT 50% OF TRENCH DEPTH).

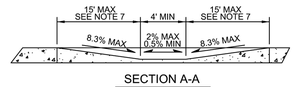
LYNNWOOD WASHINGTON PUBLIC WORKS

TYPICAL TRENCH COMPACTION FILE: I:\Standard_Plans

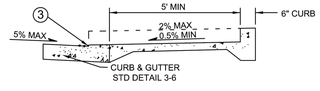
DRAWING NUMBER	STD6-17
SCALE	NONE
REVISION DATE	01/14
DEPARTMENT	PW



PLAN



SECTION A-A



SECTION B-B

NOTES

1. RAMP TEXTURING SHALL BE A BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL
2. FULL DEPTH EXPANSION JOINT.
3. NO LIP AT GUTTER LINE.
4. CURB RAMPS WILL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES.
5. TRUNCATED DOME PER ADA STANDARDS. TRUNCATED DOMES SHALL BE NON-CONCRETE, POLYMER, COMPOSITE, CAST IN PLACE UNITS COMPLIANT WITH ADA STANDARDS. COLOR SHALL BE UNIFORMLY INTEGRAL THROUGHOUT THE CROSS SECTION AND CONTRASTING COLOR WITH ADJACENT WALKWAY SURFACES PER ADA STANDARDS. SUBMIT SAMPLE TO CITY FOR APPROVAL PRIOR TO INSTALLATION.
6. POUR CURB SEPARATE FROM SIDEWALK POUR.
7. RAMP LENGTH VARIES WITH A MINIMUM OF 6' AND SHALL BE CALCULATED BASED ON A RAMP SLOPE WHICH DOES NOT EXCEED 8.3%. THE CURB RAMP MAX SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.

LYNNWOOD WASHINGTON PUBLIC WORKS

TYPE D CURB RAMP FILE: I:\Standard_Plans

DRAWING NUMBER	STD3-15A
SCALE	NONE
REVISION DATE	03/14
DEPARTMENT	PW

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RICHARD L. BALLARD STATE OF WASHINGTON 52875 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

RYAN J. PEDERSEN STATE OF WASHINGTON 49451 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS

TESC AND CIVIL DETAILS

LYNNWOOD WASHINGTON

JOB NO.:	117-088
CLIENT:	LYNN
FILENAME:	LS8-D-DET DWG
SAVE DATE:	Mar 26, 2019
PLOT DATE:	Mar 27, 2019
ENGINEER:	OMP
REVIEWED:	RJF

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

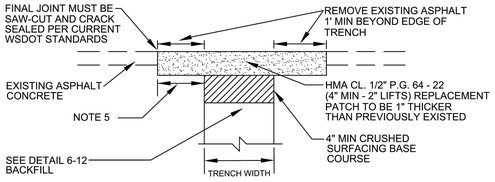
SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C11

SHEET NO.: 13 48



PAVEMENT PATCH

NOTES

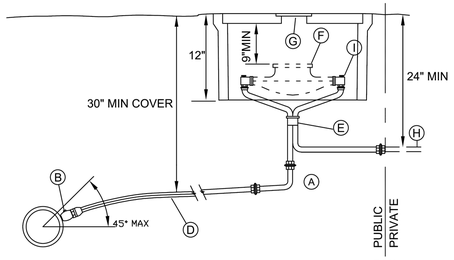
1. ALL TRENCHES IN ROADWAY AREAS SHALL BE BACKFILLED AND PATCHED WITH TEMPORARY ASPHALT AT THE END OF EACH WORK DAY, UNLESS PERMISSION IS GRANTED TO DO OTHERWISE BY THE CITY.
2. ALL TEMPORARY PATCHES ON TRENCHES SHALL BE PERMANENTLY PATCHED AS SOON AS POSSIBLE UPON COMPLETION OF WORK WITHIN THE ROADWAY AREA.
3. REPLACE AND RESTORE ALL SURFACE IMPROVEMENTS (I.E. TRAFFIC BUTTONS, CURBING, STRIPING) AS DIRECTED BY THE CITY.
4. IF THERE ARE MORE THAN 3 PARALLEL OR PERPENDICULAR PATCHES PROPOSED WITHIN 100 LINEAL FEET OF ROADWAY, THE DEVELOPER SHALL BE RESPONSIBLE TO GRIND AND OVERLAY THE ENTIRE AREA TO PUBLIC WORKS STANDARDS.
5. SEE COL STD 3-18C FOR PAVEMENT PATCHING REQUIREMENTS ON ARTERIALS AND OVERLAYS LESS THAN 5 YEARS OLD OR COL STD 3-18B FOR ALTERNATE PATCH DETAIL TO STD 3-18C.

LYNNWOOD WASHINGTON PUBLIC WORKS

PAVEMENT PATCHING DETAILS

I:\Standard_Plans

DRAWING NUMBER	STD3-18A
SCALE	NONE
REVISION DATE	12/16
DEPARTMENT	PW



DIRECT TAP WITH D.I. & C.I. PIPE

NOTE:

(A) COMPRESSION FITTING (OR APPROVED EQUAL). USE STAINLESS STIFFENER WITH POLYPIPE. BAND CLAMPS AND BARBED FITTINGS NOT ALLOWED.

(B) CORPORATION STOPS: DIRECT TAP WITH DUCTILE IRON.
DIRECT TAP AWWA CC TAPER THREAD INLET X MALE IRON PIPE THREAD OUTLET #FB400-3
3/4" & 1" - FORD BALLCORP CORPORATION STOPS #FB400-3 OR FB500-3
(EQUAL MUELLER OR A.Y. MCDONALD BRASS MAY BE SUBSTITUTED).
ROMAC AND MUELLER SADDLES WITH C.C. THREAD OR M.I.P. THREAD DUAL
STAINLESS STEEL STRAPS TO BE USED ON ALL A.C., PLASTIC, AND STEEL
MAINS 3" DIA AND LARGER.

(D) COPPER TUBING TYPE K, 2 INCHES OF SAND BEDDING BELOW,
6 INCHES OF SAND ABOVE, CONTINUOUS UNBROKEN LENGTH
FROM MAIN TO METER SETTER WITH 1 FOOT OF SLACK LOOP.

(E) 3/4" METER SETTER - FORD VBH92-12W-11-33A, OR A.Y. MCDONALD 62-212 WCDD 33X15.
1" METER SETTER - FORD VBH94-15W-11-44A, OR A.Y. MCDONALD 62-415 WDDD 44X18.
VERTICAL IN - HORIZONTAL OUT & 15" TAIL PIECE FOR 3/4" & 1".

(F) METERS SHALL BE INSTALLED BY THE CITY WATER DIVISION AT OWNERS EXPENSE.

(G) METER BOXES - 3/4" - FOGTITE B9 (CONCRETE) WITH TOUCH READ ADAPTER.
METER BOXES - 1" - FOGTITE B10 (CONCRETE) WITH TOUCH READ ADAPTER.

(H) COPPER TUBING TYPE K, PEX OR POLYETHYLENE LINE. A COPPER TRACER WIRE IS REQUIRED FOR NON-METALLIC PIPE

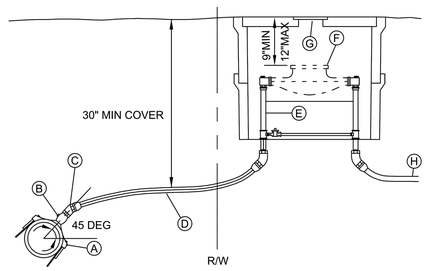
(I) SINGLE CHECK VALVE. FORD HA34-323 OR EQUAL
AS DETERMINED BY THE PUBLIC WORKS DEPARTMENT.

LYNNWOOD WASHINGTON PUBLIC WORKS

¾" AND 1" WATER SERVICE

I:\Standard_Plans

DRAWING NUMBER	STD5-1
SCALE	NONE
REVISION DATE	03/17
DEPARTMENT	PW



NOTE:

(A) ROMAC AND MUELLER DOUBLE STRAP SERVICE SADDLES WITH C.C. THREAD OR I.P. THREAD TO BE USED ON ALL MAINS.

(B) CORPORATION STOPS: 1 1/2" & 2" - FORD BALLCORP CORPORATION STOP #FB400 OR #FB500 (EQUAL MUELLER OR A.Y. MCDONALD BRASS MAY BE SUBSTITUTED).

(C) PACK JOINT AND APPROPRIATE STAINLESS STEEL STIFFENER OR COMPRESSION FITTING WITH 1/8 OR 1/4 BEND AS REQUIRED.

(D) COPPER TYPE K

(E) METER SETTERS: 1 1/2" - FORD #VBH86-12B-11-66
2" - FORD #VBH87-12B-11-77
VERTICAL IN - VERTICAL OUT WITH BYPASS.

(F) METERS SHALL BE INSTALLED BY THE CITY WATER DIVISION AT OWNERS EXPENSE.

(G) METER BOXES SHALL BE: CARSON SERIES 1730,(PLASTIC) OR FOGTITE B10 #2 (CONCRETE). SET BELOW BYPASS, WITH TOUCH READ ADAPTER.

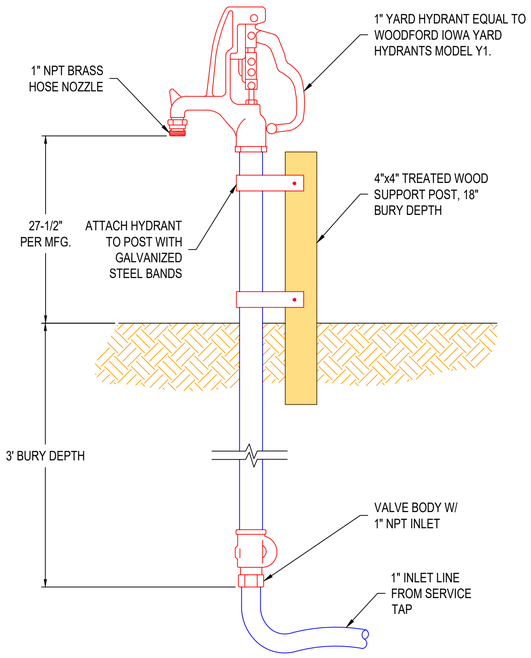
(H) COPPER TYPE K OR POLYETHYLENE LINE; A # 10 COPPER TRACE WIRE IS REQUIRED FOR POLYETHYLENE PIPE.
PRIVATE LINE INSTALLATION SHALL COMPLY WITH 7-15.3 OF THE 1998 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

LYNNWOOD WASHINGTON PUBLIC WORKS

1 1/2" & 2" METERED WATER SERVICE

I:\Standard_Plans

DRAWING NUMBER	STD5-2
SCALE	NONE
REVISION DATE	05/06
DEPARTMENT	PW



1" YARD HYDRANT DETAIL

NOT TO SCALE

108
C09

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RICHARD L. BALLARD STATE OF WASHINGTON 52875 REGISTERED PROFESSIONAL ENGINEER

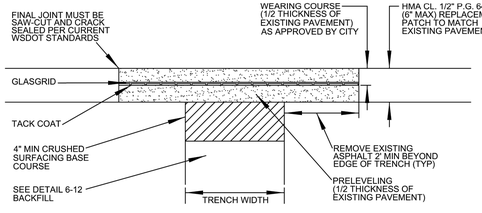
SIGNED: 03/27/19

RYAN J. PEDERSEN STATE OF WASHINGTON 49451 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

CIVIL DETAILS I



PAVEMENT PATCH

NOTES

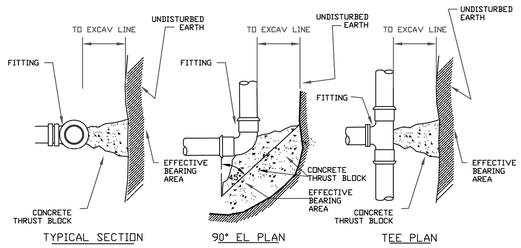
1. FOR A 4FT X 4FT PATCH MINIMUM, USE TENSAR GLASGRID 8501 AT BASE OF WEARING COURSE. PLACE TACK COAT UNDERNEATH GLASGRID. FOLLOW MANUFACTURE RECOMMENDATIONS.
2. ALL TRENCHES IN ROADWAY AREAS SHALL BE BACKFILLED AND PATCHED WITH TEMPORARY ASPHALT AT THE END OF EACH WORK DAY, UNLESS PERMISSION IS GRANTED TO DO OTHERWISE BY THE CITY.
3. ALL TEMPORARY PATCHES ON TRENCHES SHALL BE PERMANENTLY PATCHED AS SOON AS POSSIBLE UPON COMPLETION OF WORK WITHIN THE ROADWAY AREA.
4. REPLACE AND RESTORE ALL SURFACE IMPROVEMENTS (I.E. TRAFFIC BUTTONS, CURBING, STRIPING) AS DIRECTED BY THE CITY.
5. IF THERE ARE MORE THAN 3 PARALLEL OR PERPENDICULAR PATCHES PROPOSED WITHIN 100 LINEAL FEET OF ROADWAY, THE DEVELOPER SHALL BE RESPONSIBLE TO GRIND AND OVERLAY THE ENTIRE AREA TO PUBLIC WORKS STANDARDS.

LYNNWOOD WASHINGTON PUBLIC WORKS

PAVEMENT PATCHING ALTERNATIVE DETAILS

I:\Standard_Plans

DRAWING NUMBER	STD3-18B
SCALE	NONE
REVISION DATE	07/14
DEPARTMENT	PW



MINIMUM BEARING AREA TABLE

FITTING D	TEE OR DEAD END CAP	90°	45°	22 1/2°	11 1/4°
6"	4 SQ FT	6 SQ FT	3 SQ FT	2 SQ FT	2 SQ FT
8"	7 SQ FT	10 SQ FT	6 SQ FT	3 SQ FT	2 SQ FT
10"	10 SQ FT	15 SQ FT	9 SQ FT	5 SQ FT	3 SQ FT
12"	14 SQ FT	22 SQ FT	12 SQ FT	6 SQ FT	4 SQ FT
16"	25 SQ FT	38 SQ FT	21 SQ FT	11 SQ FT	7 SQ FT
18"	32 SQ FT	32 SQ FT	27 SQ FT	14 SQ FT	8 SQ FT

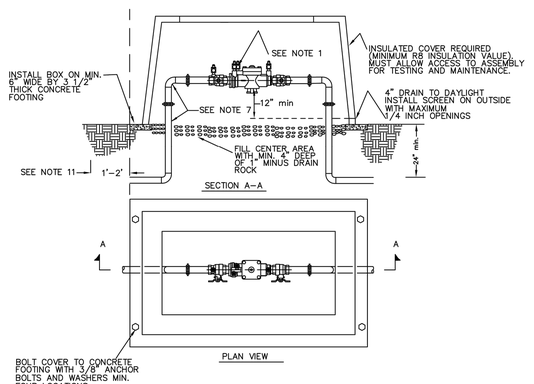
NOTES:
1. BEARING AREA TABLE BASED ON 250 PSI PRESSURE AND 2000 PSF SOIL BEARING. IF PRESSURE IS GREATER OR SOIL BEARING IS LESS, THE THRUST BLOCK SIZE SHALL BE INCREASED.
2. THIS TABLE REPRESENTS THE 'MINIMUM' CONSTRUCTION STANDARDS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZE OF ALL THRUST BLOCKS BASED ON EXISTING AND LOCAL CONDITIONS.
3. ALL BLOCKS ON TEES MUST BE SEPARATED FOR DIRECTION OF THRUST.
4. SHEET PLASTIC OBER NUTS AND BOLTS PRIOR TO CONCRETE POUR.
5. ALL FITTING TO HAVE THRUST BLOCKING AND ALL THRUST BLOCKS TOBE CONTRETE AND ARE TO BE POURED IN PLACE.
6. BLOCKS TO BE FORMED AS REQUIRED BY LYNNWOOD INSPECTOR.

LYNNWOOD WASHINGTON PUBLIC WORKS

HORIZONTAL THRUST BLOCKS

I:\Standard_Plans

DRAWING NUMBER	STD5-5
SCALE	NONE
REVISION DATE	11/01
DEPARTMENT	PW



* RPBA-COVER SHALL BE LOCATED IMMEDIATELY DOWNSTREAM OF WATER METER BOX PRIOR TO ANY BRANCH CONNECTIONS, WITH NO MORE THAN 2' FROM WATER METER.

NOTES

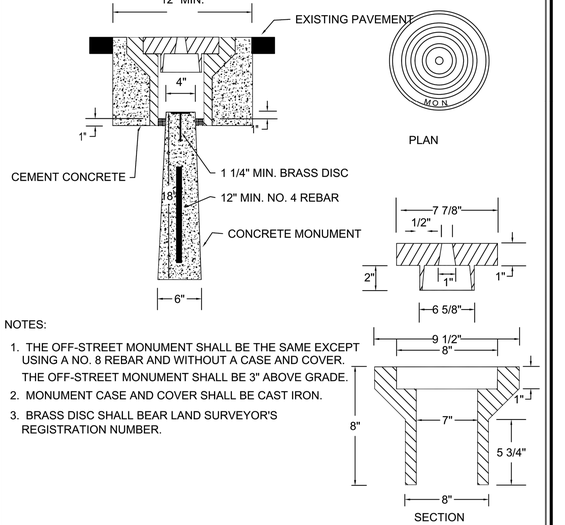
1. Cross connection control assembly shall be located immediately downstream of water meter box prior to any branch connections, with no more than 1'-2' between boxes. Alternate location allowed with approval from Public Works.
2. Back flow assemblies must be selected from Washington State Department of Health list of Backflow assemblies approved for installation in Washington State.
3. After installation of the backflow assembly, the developer or installer will call the Lynnwood Public Works Department for an inspection.
4. Following an Inspection Approval by the Public Works Department, the backflow assembly must be scheduled for an initial test by a Washington State Certified Backflow Assembly Tester. Meter must be installed prior to testing.
5. RPBA must be purchased and installed as a unit. No modifications to any part of the assembly are allowed.
6. Freeze protection is the responsibility of the owner and shall not interfere with operation or testing of the assembly.
7. Pipe from meter to RPBA shall be copper or brass.
8. Unions must be installed vertically or horizontally. Dielectric unions must be used to separate dissimilar materials.
9. The installer/developer must provide test cock protection with plugs, caps or covers.
10. Minimum 12" gap from bottom of relief port to top of daylight drain.
11. Backflow assembly to be installed within 2' of water meter unless approved by the City.

LYNNWOOD WASHINGTON PUBLIC WORKS

2 1" AND SMALLER REDUCED PRESSURE BACKFLOW (RPBA) ASSEMBLY

I:\Standard_Plans

DRAWING NUMBER	STD 5-12B
SCALE	NONE
REVISION DATE	04/14
DEPARTMENT	PW



NOTES:

1. THE OFF-STREET MONUMENT SHALL BE THE SAME EXCEPT USING A NO. 8 REBAR AND WITHOUT A CASE AND COVER. THE OFF-STREET MONUMENT SHALL BE 3" ABOVE GRADE.
2. MONUMENT CASE AND COVER SHALL BE CAST IRON.
3. BRASS DISC SHALL BEAR LAND SURVEYOR'S REGISTRATION NUMBER.

LYNNWOOD WASHINGTON PUBLIC WORKS

SURVEY MONUMENT

I:\Standard_Plans

DRAWING NUMBER	STD3-17
SCALE	NONE
REVISION DATE	11/01
DEPARTMENT	PW

LYNNWOOD WASHINGTON

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-DI-DET.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: OMP
REVIEWED: RJF

REVISIONS

NO	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	OMP	RJF

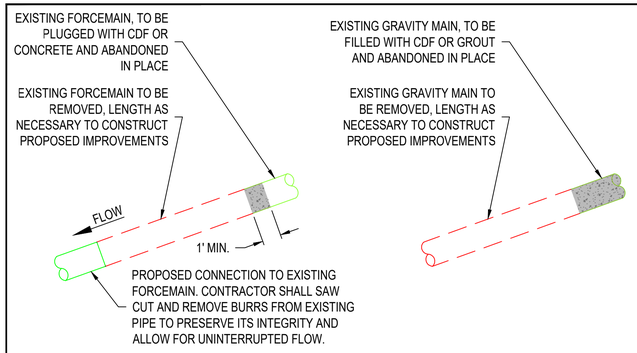
SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C12

SHEET NO.: 14 48



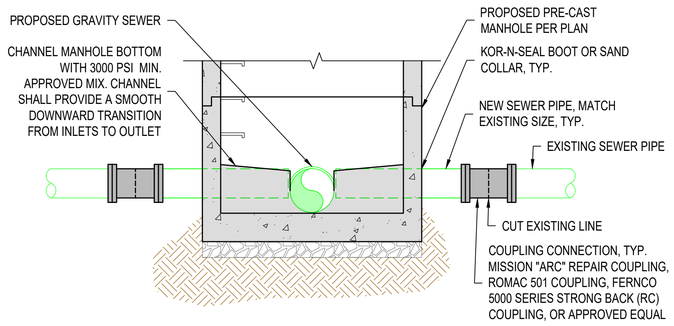
FORCEMAIN

GRAVITY MAIN

SEWER ABANDONMENT

NOT TO SCALE

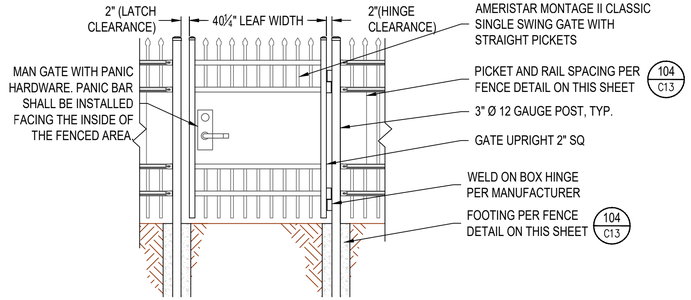
100 / C09



SEWER MANHOLE CONNECTION DETAIL

NOT TO SCALE

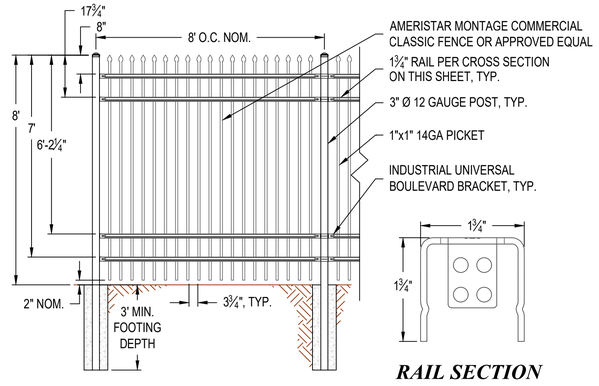
101 / --



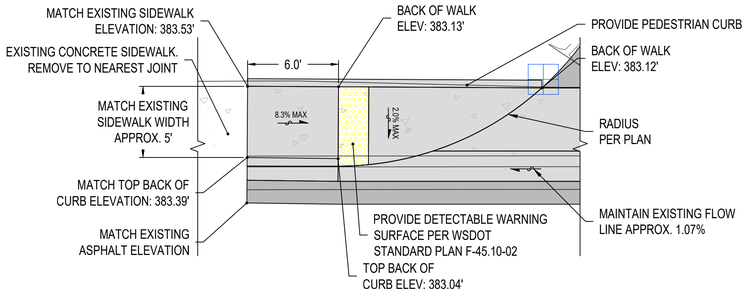
SECURITY MAN GATE DETAIL

NOT TO SCALE

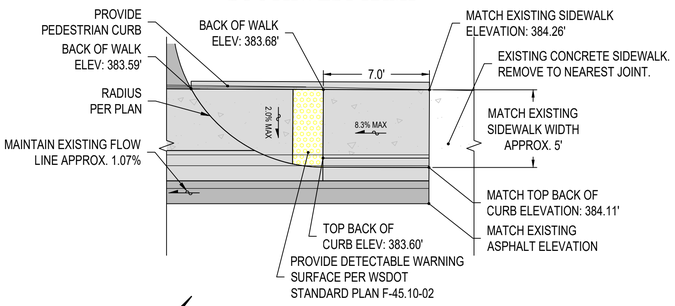
103 / C09



RAIL SECTION



SOUTHWEST RAMP

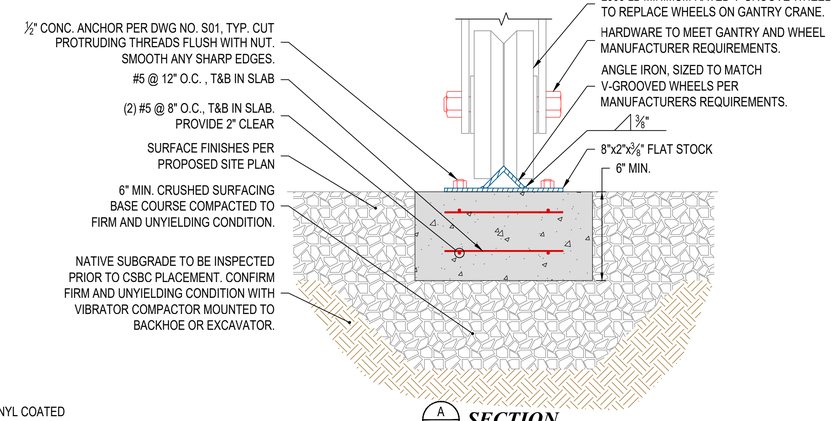


NORTHEAST RAMP

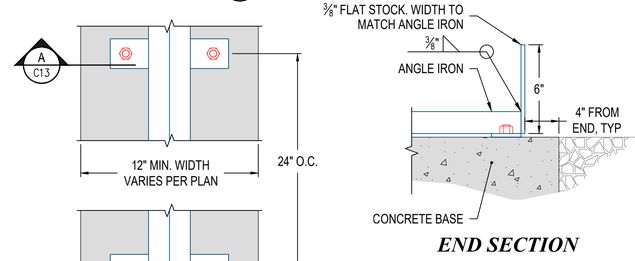
CURB RAMP DETAILS

NOT TO SCALE

106 / C09



A / C13 ***SECTION***

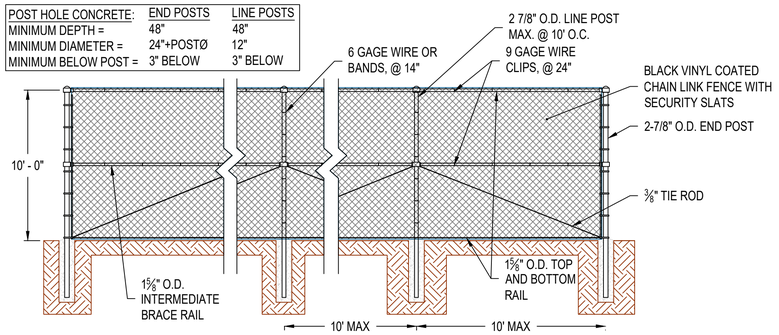


PLAN ***END SECTION***

GANTRY V-TRACK DETAIL

NOT TO SCALE

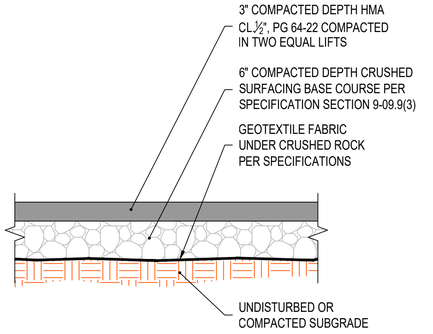
107 / C09



CHAIN LINK FENCE DETAIL

NOT TO SCALE

105 / C09



HOT MIX ASPHALT PAVEMENT SECTION

NOT TO SCALE

102 / C09

RH2 ENGINEERING
40 YEARS SINCE 1978
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RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

RYAN J. PEDERSEN — STATE OF WASHINGTON — 49451 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

CIVIL DETAILS II

LYNNWOOD WASHINGTON

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-DET.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: CMP
REVIEWED: RJF

REVISIONS

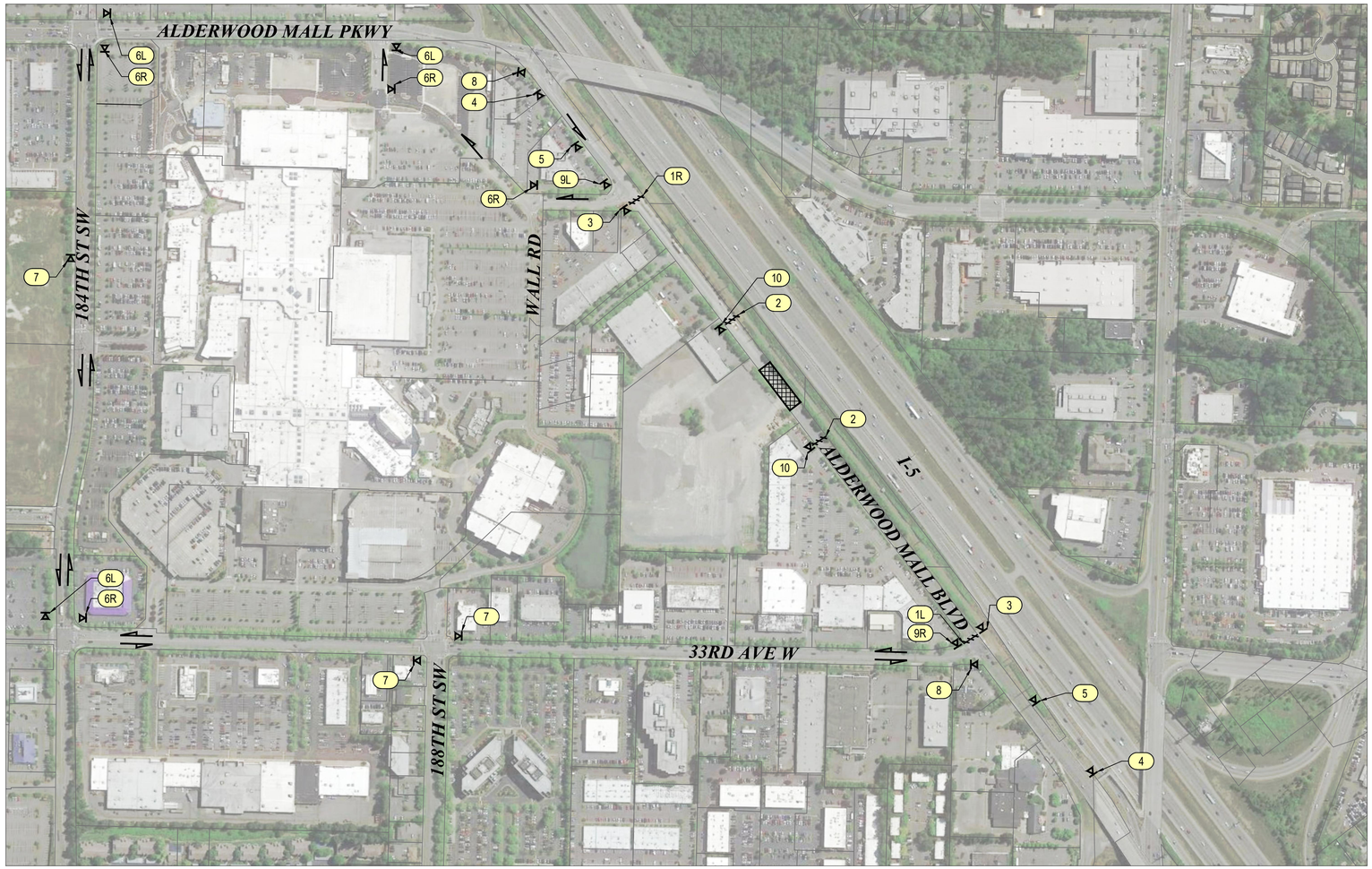
NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	CMP	RJF

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C13
SHEET NO.: 15
48



PLAN VIEW
APPROX. SCALE: 1" = 250'

ADVANCED WARNING SIGN SPACING

ROAD TYPE	*SPEED*	*DISTANCES BETWEEN ADVANCED WARNING SIGNS**			
		A**	B**	C**	D**
RURAL ROADS	55 45	500 FT. ±	500 FT. ±	500 FT. ±	500 FT. ±
RURAL ROADS AND URBAN ARTERIALS	40 35	350 FT. ±	350 FT. ±	350 FT. ±	N/A
RURAL ROADS, URBAN STREETS, RESIDENTIAL BUSINESS DISTRICTS	30 25	200 FT. ***	200 FT. ***	200 FT. ***	N/A
URBAN STREETS	25 OR LESS	100 FT. ***	100 FT. ***	100 FT. ***	N/A

*ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS, AND DRIVEWAYS.
**THIS REFERS TO THE DISTANCE BETWEEN ADVANCE WARNING SIGNS. SEE FIGURE 1 PER WAC 296-155-305, TYPICAL LANE CLOSURE ON TWO-LANE ROAD. THIS SITUATION IS TYPICAL FOR ROADWAYS WITH SPEED LIMITS LESS THAN 45 MPH.
***THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.
EXEMPTION: IN A MOBILE FLAGGING OPERATION, AS DEFINED BY THE MUTCD WHEN THE FLAGGER IS MOVING WITH THE OPERATION, THE "FLAGGER AHEAD (SYMBOL OR TEXT)" SIGN MUST BE:
- WITHIN 1,500 FEET OF THE FLAGGER; AND
- THE FLAGGER STATION MUST BE SEEN FROM THE SIGN.

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555 (811)
UNDERGROUND SERVICE

SIGN LEGEND

1* 1L 1R
- WSDOT TYPE 3 BARRICADE PER WSDOT STANDARD PLAN K-80.20-00 WITH DETOUR SIGN (M4-10 L OR R) AND ROAD CLOSED SIGN (R11-4) ATTACHED
- 1* INDICATES THAT SIGN M4-10 IS NOT REQUIRED ON THE INDICATED BARRICADE

2
- WSDOT TYPE 3 BARRICADE PER WSDOT STANDARD PLAN K-80.20-00 WITH ROAD CLOSED SIGN (R11-2) ATTACHED

3
- CUSTOM SIGN MEETING THE REQUIREMENTS SET FORTH IN THE MUTCD AND THE WSDOT SIGN FABRICATION MANUAL

4
- W20-3

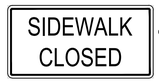
5
- W20-2

6L 6R
- M4-9

7
- MODIFIED M4-9

8
- M4-8A

9L 9R
- R9-11 (L OR R INDICATES ARROW DIRECTION)



10
- R9-9

DETOUR NOTES

- ALL TRAFFIC CONTROL DEVICES ARE REQUIRED TO MEET THE LATEST EDITION OF THE MUTCD.
- ALL BARRICADES ARE TO HAVE AMBER FLASHING LIGHTS SECURLY ATTACHED TO THE BARRICADE PER WSDOT STANDARD PLAN K80.20-00.
- PROVIDE EMERGENCY VEHICLE ACCESS TO ALL ADJACENT PROPERTIES AND BUILDINGS WITHIN THE SCOPE OF THIS PROJECT. NOTIFY LOCAL POLICE AND FIRE DEPARTMENTS AT LEAST 48 HOURS IN ADVANCE OF ANY ACTIONS BY THE CONTRACTOR WHICH MAY AFFECT THEIR FUNCTIONS. PROVIDE 20-FOOT WIDE ACCESS FOR EMERGENCY VEHICLES THROUGH ALDERWOOD MALL BLVD WHEN WORK IS NOT ACTIVELY BEING PERFORMED, INCLUDING NIGHT ACCESS.
- PROVIDE ACCESS FOR ALL BUSINESSES AND PATRONS REQUIRING ACCESS FROM ALDERWOOD MALL PARKWAY DURING ROAD CLOSURE. NOTIFY BUSINESSES AT LEAST 48 HOURS IN ADVANCE TO ANY TRENCH WORK AFFECTING ACCESS TO THEIR PROPERTY.
- PROVIDE A SAFE AND ACCESSIBLE ROUTE THROUGH THE CONSTRUCTION AREA FOR PEDESTRIANS. PROVIDE SIGNAGE AS NECESSARY PER THE MUTCD. ALL TEMPORARY PEDESTRIAN ROUTES SHALL MEET ALL REQUIREMENTS OF THE ADA STANDARDS. PEDESTRIANS SHALL BE ROUTED ALONG THE INTERURBAN TRAIL.
- SIGN PLACEMENT IS APPROXIMATE. LOCATE SIGNS IN A MANNER TO AVOID CONFLICTS WITH DRIVEWAYS, SIDEWALKS, UTILITIES AND EXISTING SIGNAGE. ENSURE ALL TEMPORARY SIGNAGE IS CLEARLY VISIBLE TO DRIVERS.
- IF WORK IS REQUIRED OUTSIDE THE WORK ZONE CLOSED TO TRAFFIC, THE CONTRACTOR SHALL COORDINATE WITH THE CITY AND SUBMIT TRAFFIC CONTROL PLANS FOR APPROVAL. ANY APPROVED LANE CLOSURES MUST MEET CITY STANDARD DETAILS ON DWG NO. TC02.
- THIS TRAFFIC CONTROL PLAN ASSUMES THAT THE ROAD WILL REMAIN CLOSED FOR THE DURATION SPECIFIED IN THE SPECIAL PROVISIONS. IF LANES ARE OPENED TO TRAFFIC AND THE WORK ZONE INCLUDES OR USES GROOVED PAVEMENT, ABRUPT LANE EDGES, STEEL PLATES, OR GRAVEL OR EARTH SURFACES, THE CONSTRUCTION ZONE MUST BE POSTED WITH SIGNS STATING THE CONDITIONS, AS REQUIRED BY CURRENT LAW, AND IN ADDITION MUST WARN MOTORCYCLISTS OF THE POTENTIAL HAZARD. SIGNS INCLUDED BUT NOT LIMITED TO "MOTORCYCLES USE EXTREME CAUTION" (W21-1701), "CAUTION STEEL PLATE ON ROADWAY" (W21-1801), "FRESH OIL" (W21-2), AND "GROOVED PAVEMENT" (W8-15) MUST BE USED IN ADDITION TO THE TRAFFIC CONTROL SIGNS SHOWN ON THESE PLANS.

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SIGNED: 03/27/19

EDWIN HALLMARK — STATE OF WASHINGTON — 38889 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

DETOUR PLAN

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

REVISIONS

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-P-TC.DWG
SAVE DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: OMP
REVIEWED: RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: TC01
SHEET NO.: 16

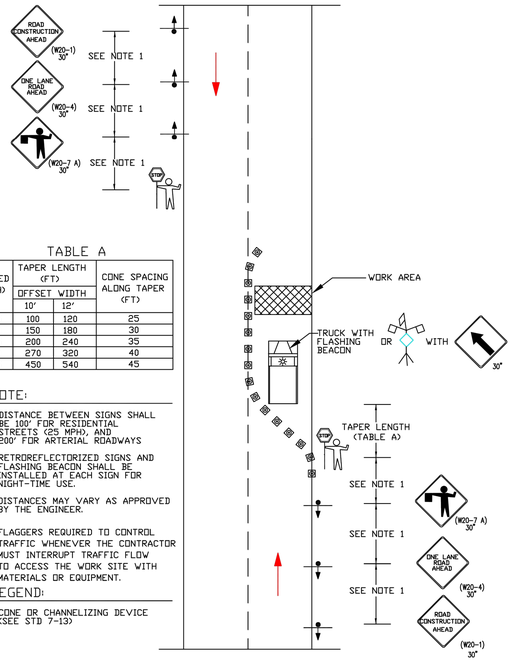


TABLE A

SPEED (MPH)	TAPER LENGTH (FT) OFFSET WIDTH 10'	TAPER LENGTH (FT) OFFSET WIDTH 12'	CONE SPACING ALONG TAPER (FT)
25	100	120	25
30	150	180	30
35	200	240	35
40	270	320	40
45	450	540	45

NOTE:

1. DISTANCE BETWEEN SIGNS SHALL BE 100' FOR RESIDENTIAL STREETS (25 MPH), AND 200' FOR ARTERIAL ROADWAYS
2. RETROREFLECTORIZED SIGNS AND FLASHING BEACON SHALL BE INSTALLED AT EACH SIGN FOR NIGHT-TIME USE.
3. DISTANCES MAY VARY AS APPROVED BY THE ENGINEER.
4. FLAGGERS REQUIRED TO CONTROL TRAFFIC WHENEVER THE CONTRACTOR MUST INTERRUPT TRAFFIC FLOW TO ACCESS THE WORK SITE WITH MATERIALS OR EQUIPMENT.

LEGEND:

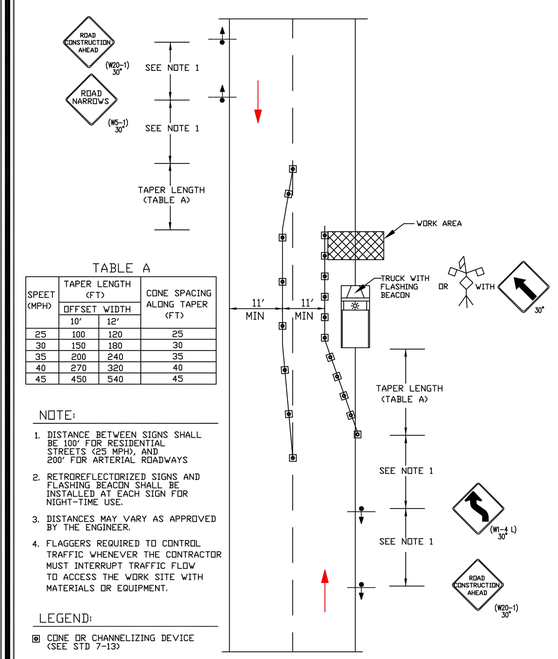
▣ CONE OR CHANNELIZING DEVICE (SEE STD 7-13)

LYNNWOOD WASHINGTON PUBLIC WORKS

TRAFFIC CONTROL PLAN
2 LANE ROADWAY; ONE LANE CLOSED WITH ALTERNATING ONE-WAY TRAFFIC AND FLAGGERS

I:\Standard_Plans

DRAWING NUMBER	STD7-1
SCALE	NONE
REVISION DATE	06/10
DEPARTMENT	PW



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LEGEND:

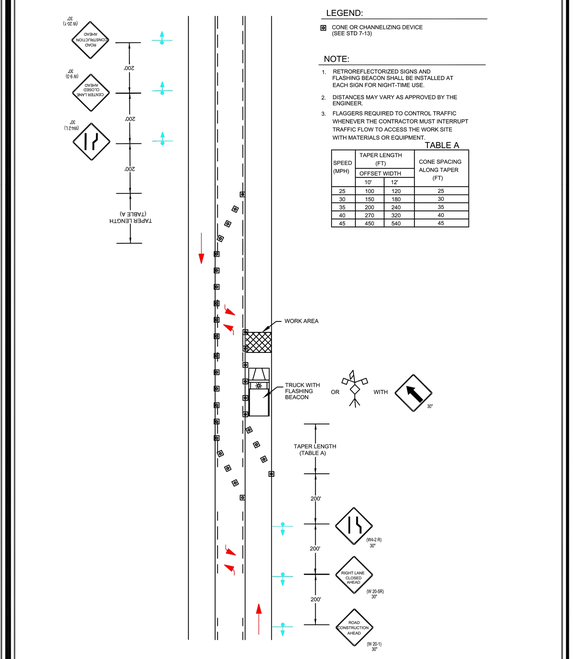
▣ CONE OR CHANNELIZING DEVICE (SEE STD 7-13)

LYNNWOOD WASHINGTON PUBLIC WORKS

TRAFFIC CONTROL PLAN
2 LANE ROADWAY; PARTIAL LANE CLOSURE

I:\Standard_Plans

DRAWING NUMBER	STD7-2
SCALE	NONE
REVISION DATE	06/10
DEPARTMENT	PW

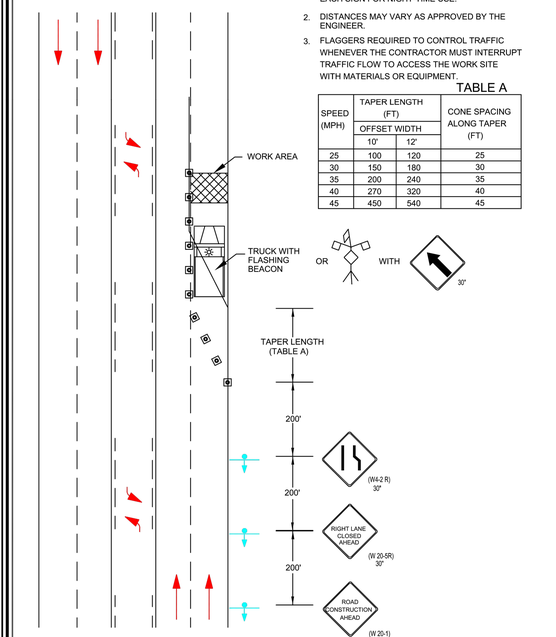


LYNNWOOD WASHINGTON PUBLIC WORKS

TRAFFIC CONTROL PLAN
2 LANE ROADWAY WITH CENTER TURN LANE WITH LANE CLOSED

I:\Standard_Plans

DRAWING NUMBER	STD7-4A
SCALE	NONE
REVISION DATE	04/13
DEPARTMENT	PW

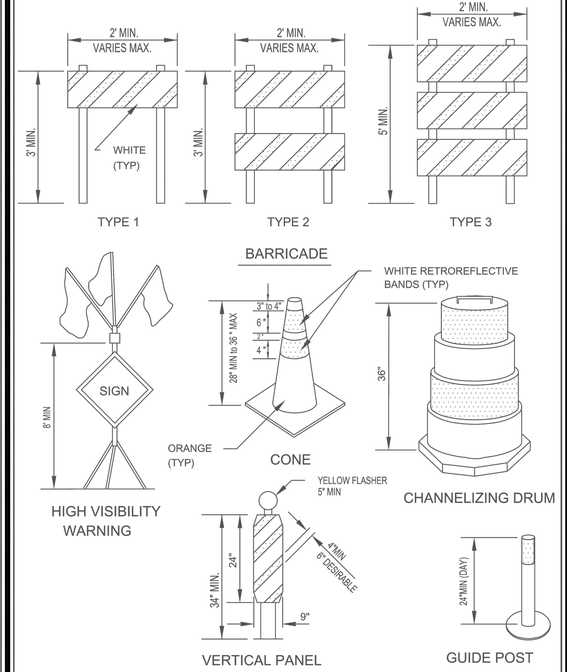


LYNNWOOD WASHINGTON PUBLIC WORKS

TRAFFIC CONTROL PLAN
5 LANE ROADWAY WITH RIGHT LANE CLOSED

I:\Standard_Plans

DRAWING NUMBER	STD7-4
SCALE	NONE
REVISION DATE	04/13
DEPARTMENT	PW



LYNNWOOD WASHINGTON PUBLIC WORKS

TRAFFIC CONTROL DEVICES

I:\Standard_Plans

DRAWING NUMBER	STD7-13
SCALE	NONE
REVISION DATE	08/11
DEPARTMENT	PW

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SIGNED: 03/27/19

RYAN J. PEDERSEN — STATE OF WASHINGTON — 49451 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

LYNNWOOD WASHINGTON

TRAFFIC CONTROL DETAILS

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-DET.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: OMP
REVIEWED: RJF

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: TC02
SHEET NO.: 17
48

GENERAL STRUCTURAL NOTES (200 TYP.)

GEOTECHNICAL PARAMETERS:

MINIMUM FROST DEPTH	18"
MAXIMUM SOIL BEARING CAPACITY:	2,000 PSF
SOILS REPORT REFERENCE	"ENGINEERING GEOLOGY REPORT" PREPARED BY RH2 ENGINEERING

OTHER LOADING PARAMETERS:

WIND LOAD	105 MPH, EXPOSURE C
SNOW LOAD	25 PSF
EARTHQUAKE LOAD	LAT 47.825, LONG 122.274, SOIL PROFILE TYPE C

OTHER DESIGN VALUES USED:

OCCUPANCY CATEGORY	III, WASTE WATER FACILITY
CONCRETE	4,000 PSI WITH 60,000 PSI REINFORCING
CMU	1,500 PSI WITH 60,000 PSI REINFORCING
STEEL	A36 FOR PLATES, A992 FOR OTHER

LIVE LOADS:

ROOF	20 PSF

CRITERIA:

ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2012 EDITION)

SPECIAL INSPECTIONS, TESTS, AND OBSERVATIONS:

SPECIAL INSPECTIONS AND TESTS SHALL INCLUDE THE FOLLOWING. REFER TO IBC SECTION 1704 AND 1705 FOR DETAILS.

1. SPECIAL INSPECTIONS BY THE GEOTECHNICAL ENGINEER INCLUDING:
   - 1.1. SITE EXCAVATION AND GRADING
   - 1.2. PLACEMENT OF STRUCTURAL FILL AND SOIL COMPACTION
   - 1.3. VERIFICATION OF SOIL-BEARING CAPACITY
2. CONCRETE PLACEMENT AT CONCRETE CONSTRUCTION: CONTINUOUS, SEE ALSO SECTION 1705.3 OF THE INTERNATIONAL BUILDING CODE.
3. REINFORCEMENT AT CONCRETE CONSTRUCTION: PERIODIC, SEE ALSO SECTION 1705.3.
4. TESTING OF CONCRETE FOR SPECIFIED COMPRESSIVE STRENGTH (FC), AIR CONTENT AND SLUMP. SEE ALSO TABLE 1705.3.
5. STRUCTURAL OBSERVATION BY A REGISTERED DESIGN PROFESSIONAL IN ACCORDANCE WITH IBC 1704.5 SHALL BE PROVIDED.
6. CONCRETE ANCHOR INSPECTION SHALL BE PER THE SPECIFICATIONS 3.15.19.

GENERAL:

LINES SHOWN ON DRAWINGS MAY BE ASSOCIATED WITH CAD MODELING AND MAY NOT REPRESENT REQUIRED OR ALLOWED JOINTS. SEE DETAILS FOR CLARIFICATION ON REQUIRED AND ALLOWED JOINTS.

REINFORCED CONCRETE:

1. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315-99 AND 318-11. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH THE "REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE" - SEE THIS SHEET. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
2. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
3. A 6" WATERSTOP SHALL BE PLACED AT ALL BELOW GRADE CONCRETE SLAB AND WALL CONSTRUCTION JOINTS AND AS SHOWN TO PROVIDE A WATERTIGHT STRUCTURE.
4. CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
   - 4.1. FOOTINGS AND OTHER UNIFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
   - 4.2. FORMED SURFACES EXPOSED TO EARTH (WALLS BELOW GRADE), WATER OR WEATHER (#6 BARS OR LARGER) . . . . . 2"
   - 4.3. COLUMN TIES OR SPIRALS AND BEAM STIRRUPS . . . . . 2"
   - 4.4. SLABS AND INTERIOR FACES . . . . . 2"

ABBREVIATIONS:

AL - ALUMINUM
CHK - CHECKERED
CL - CENTERLINE
CLR - CLEAR
EA - EACH
EF - EACH FACE
FB - FLAT BAR
GALV - GALVANIZED
HORZ - HORIZONTAL
LLV - LONG LEG VERT
O.C. - ON CENTER
PL - PLATE
RB - ROUND BAR
RST - REINF. STEEL
SST - STAINLESS STEEL
T&B - TOP & BOTTOM
VERT - VERTICAL

REINFORCEMENT SPLICE AND DEVELOPMENT SCHEDULE

BAR	Ld, MINIMUM STRAIGHT DEVELOPMENT LENGTHS			MINIMUM LAP SPLICE LENGTHS	
	MINIMUM	TOP BARS	OTHERWISE	CLASS A	CLASS B
#3	19"	25"	29"	Ld	1.3xLd
#4	24"	32"	36"	Ld	1.3xLd
#5	29"	38"	43"	Ld	1.3xLd
#6	42"	55"	63"	Ld	1.3xLd

"MINIMUM" IF:
MIN COVER OF ONE BAR Ø AND MIN SPACING OF TWO BAR DIAMETERS
MIN COVER ONE Ø, MIN SPACING OF ONE BAR Ø, AND TIES OR STIRRUPS
LESS THAN 12" OF FRESH CONCRETE BELOW HORIZONTAL BARS
"TOP BARS" IF:
MEETS CRITERIA FOR MIN EXCEPT 12" OR MORE FRESH CONC BELOW
"OTHERWISE" IF:
DOES NOT MEET REQUIREMENTS FOR MIN DEVELOPMENT LENGTH
"CLASS A" IF:
ONLY HALF OF BARS LAPPED AT ONE LOCATION AND
TWICE THE REINFORCING FOR TENSION IS PROVIDED
"CLASS B" IF:
LAP SPLICES DO NOT MEET CLASS A REQUIREMENTS

CONCRETE ANCHORS SHALL BE EITHER HILTI HIT-RE 500-V3 INJECTABLE MORTAR, SIMPSON STRONG-TIE SET-XP ANCHORING ADHESIVE, OR POWERS PE1000+ ADHESIVE ANCHORS AS SPECIFIED. WHERE SIZE IS CALLED OUT ON THE DRAWINGS, PROVIDE MINIMUM EMBEDMENT DEPTHS AS SHOWN ON THE FOLLOWING TABLES. PROVIDE MINIMUM EDGE DISTANCES AND SPACING AS SHOWN ON THE FOLLOWING TABLE UNLESS SPECIFICALLY DETAILED OTHERWISE.

INSTALL ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

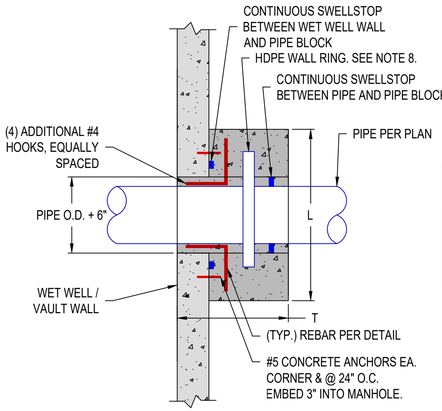
NOTIFY OWNER 24 HOURS IN ADVANCE OF INSTALLATION OF ALL ANCHORS.

WHERE SIZE IS NOT CALLED OUT, ANCHOR SHALL BE SELECTED BASED ON DESIGN LOADS.IF THE MINIMUM EDGE DISTANCE AND/OR MINIMUM SPACING CAN NOT BE ACHIEVED, REFER TO PRODUCT INFORMATION FOR REDUCTION IN ALLOWABLE LOADS.

CONCRETE ANCHORS
HILTI HIT-RE 500-V3, SIMPSON STRONG-TIE SET-XP & POWERS PE1000+

DIA. OF ROD (INCHES) OR REBAR SIZE NO.	MIN. EDGE DISTANCE (INCHES)	MIN. EMBEDMENT (INCHES)	MIN. ANCHOR SPACING (INCHES)	ALLOWABLE LOAD BASED ON BOND STRENGTH (POUNDS)	
				TENSION	SHEAR
1/2	2-1/2	2-3/4	2-1/2	1,027	2,210
5/8	3-1/8	3-1/8	3-1/8	1,312	2,827
3/4	3-3/4	3-1/2	3-3/4	1,556	3,351
7/8	4-3/8	3-1/2	4-3/8	1,556	3,351
#4	2-1/2	4-1/2	2-1/2	1,520	3,618
#5	3-1/8	5-5/8	3-1/8	1,775	5,494
#6	3-3/4	6-3/4	3-3/4	2,225	7,570
#7	4-3/8	7-7/8	4-3/8	2,440	9,428
#8	5	9	5	4,520	11,507

CONCRETE ANCHOR (201 TYP.)



SIZING TABLE

PIPE DIA.	T (min)	L (min)
24"	12"	60"
30"	12"	66"
36"	12"	72"

NOTE: NOT ALL SIZES SHOWN. PIPE SIZES SHALL BE BASED ON OUTSIDE PIPE DIAMETER.

PIPE BLOCKING NOTES:

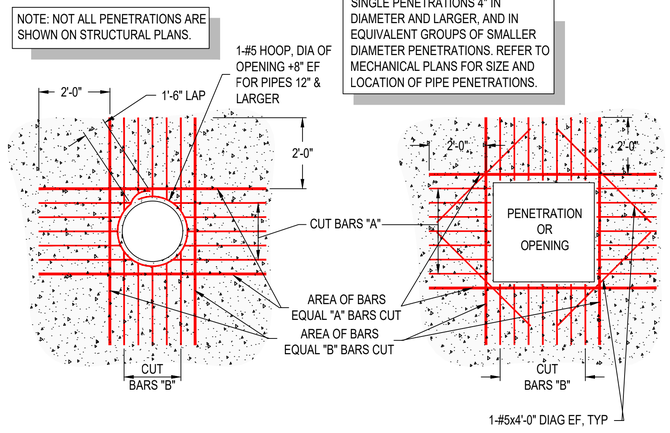
1. DETAIL SHALL BE USED AT ALL STRUCTURE PENETRATIONS WHERE HDPE PIPE IS USED FOR GRAVITY SEWER AND STORM PIPE AND AS SPECIFIED ON THE PLANS. WHERE ADJACENT STRUCTURE IS A MANHOLE, CONCRETE ANCHORS SHALL BE SIMILAR TO MANHOLE DETAIL ON THIS SHEET.
2. CONCRETE BLOCK SHALL BE PER SECTION 7-09.3(21) OF THE WSDOT STANDARD SPECIFICATIONS.
3. MAINTAIN 18" MINIMUM COVER OVER THE TOP OF BLOCK.
4. BOTTOM OF BLOCK IS TO BE ON UNDISTURBED SOIL.
5. TRENCH TO BE BACKFILLED TO THE FULL DEPTH OF THE BLOCK WITH CRUSHED ROCK COMPACTED TO 95% DENSITY ON ALL SIDES OF BLOCK AND TO A MINIMUM DISTANCE OF 4' IN FRONT OF AND BEHIND PROPOSED BLOCK.
6. FOR SOIL CONDITIONS NOT SHOWN, BLOCK IS TO BE DESIGNED BY THE ENGINEER.
7. IF BLOCK CANNOT BE KEYED INTO UNDISTURBED SOIL TO THE SATISFACTION OF THE ENGINEER:
   - THE BLOCK LENGTH SHALL BE EXTENDED TO PROVIDE AN ADEQUATE KEY OR
   - CDF SHALL BE USED TO FILL BACK TO NATIVE SOIL OR
   - THE TRENCH SHALL BE BACKFILLED AND COMPACTED TO 95% DENSITY A MINIMUM DISTANCE OF 15 FEET IN FRONT OF THE BLOCK TO THE SATISFACTION OF THE ENGINEER.
8. HDPE WALL RING MUST BE SIZED TO RESIST PULL-OUT FORCE OF HDPE PIPE DUE TO THERMAL EXPANSION AND PIPELINE CHARGING PER MANUFACTURER'S RECOMMENDATION.

PIPE BLOCKING (205 TYP.)

NOT TO SCALE

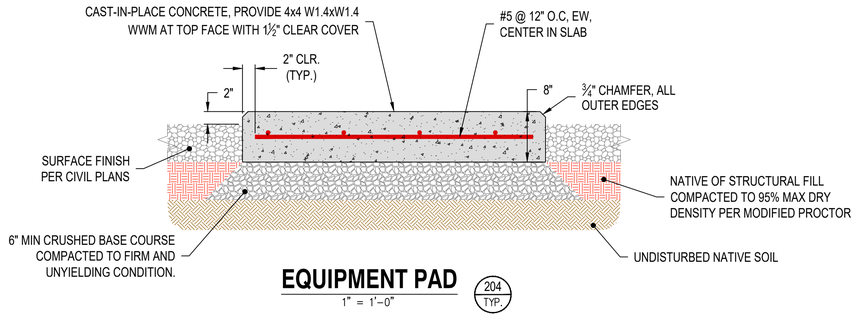
NOTE: NOT ALL PENETRATIONS ARE SHOWN ON STRUCTURAL PLANS.

NOTE: THIS DETAIL USED FOR SINGLE PENETRATIONS 4" IN DIAMETER AND LARGER, AND IN EQUIVALENT GROUPS OF SMALLER DIAMETER PENETRATIONS. REFER TO MECHANICAL PLANS FOR SIZE AND LOCATION OF PIPE PENETRATIONS.



PENETRATION AND OPENING REINFORCEMENT (203 TYP.)

NOT TO SCALE



EQUIPMENT PAD (204 TYP.)

1" = 1'-0"

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SIGNED: 03/27/19

TOM MARSHALL CONNELL — STATE OF WASHINGTON — 44672 — PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STRUCTURAL GENERAL NOTES AND DETAILS

LYNNWOOD WASHINGTON

NO.	DATE	DESCRIPTION
1	03/27/19	ISSUED FOR BIDDING

REVISIONS

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-STR01.DWG
SAVE DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: DND
REVIEWED: JMC
DRAWN: OMP
REVIEW: RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S01
SHEET NO.: 18 48

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UNDERGROUND SERVICE

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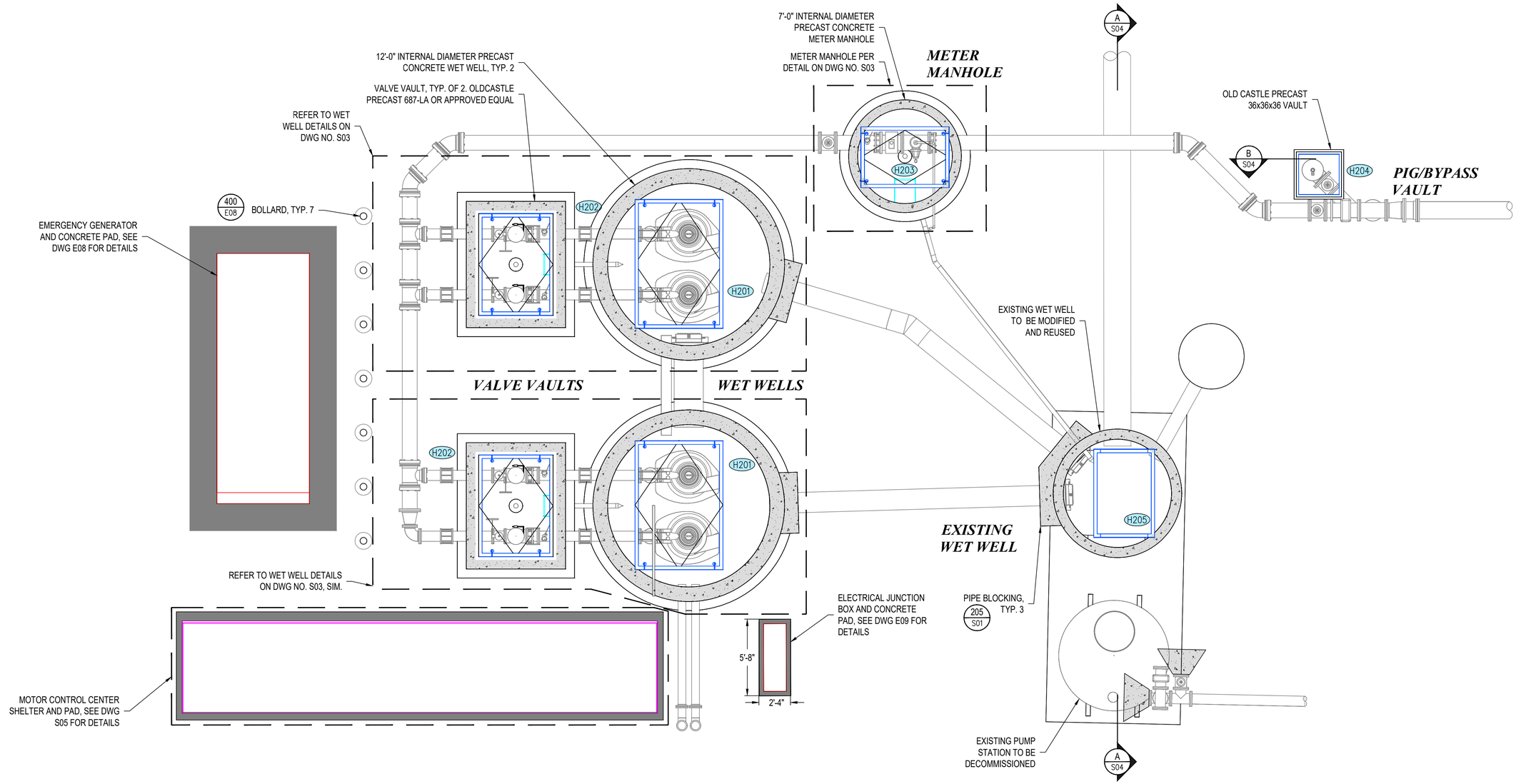

LIFT STATION 8 STRUCTURAL PLAN

1/4" = 1'-0"

PROJECT

ACCESS HATCH SCHEDULE

NO.	CLEAR OPENING	NO. OF LEAVES	RATING	MOUNTING*	SAFETY CHAIN**	QUANTITY	GASKET
H201	72" x 108"	2	H-20	BOLTS	YES	2	ODOR TIGHT
H202	60" x 84"	2	H-20	ANCHOR	YES	2	STANDARD
H203	48" x 72"	2	H-20	ANCHOR	YES	1	STANDARD
H204	36" x 36"	2	H-20	ANCHOR	NO	1	STANDARD
H205	48" x 72"	2	H-20	BOLTS	YES	1	ODOR TIGHT

ACCESS HATCH NOTES:
* ACCESS HATCHES OVER STRUCTURES EXPOSED TO RAW SEWAGE SHALL BE MOUNTED USING STAINLESS STEEL. OTHER ACCESS HATCH SHALL BE MOUNTED USING THE STANDARD FRAME ANCHORS THAT COME WITH THE HATCH.

** SAFETY CHAINS SHALL BE PROVIDED ON ACCESS HATCHES AS SHOWN IN DETAIL 301 M05

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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS
LYNNWOOD WASHINGTON

STRUCTURAL PLAN

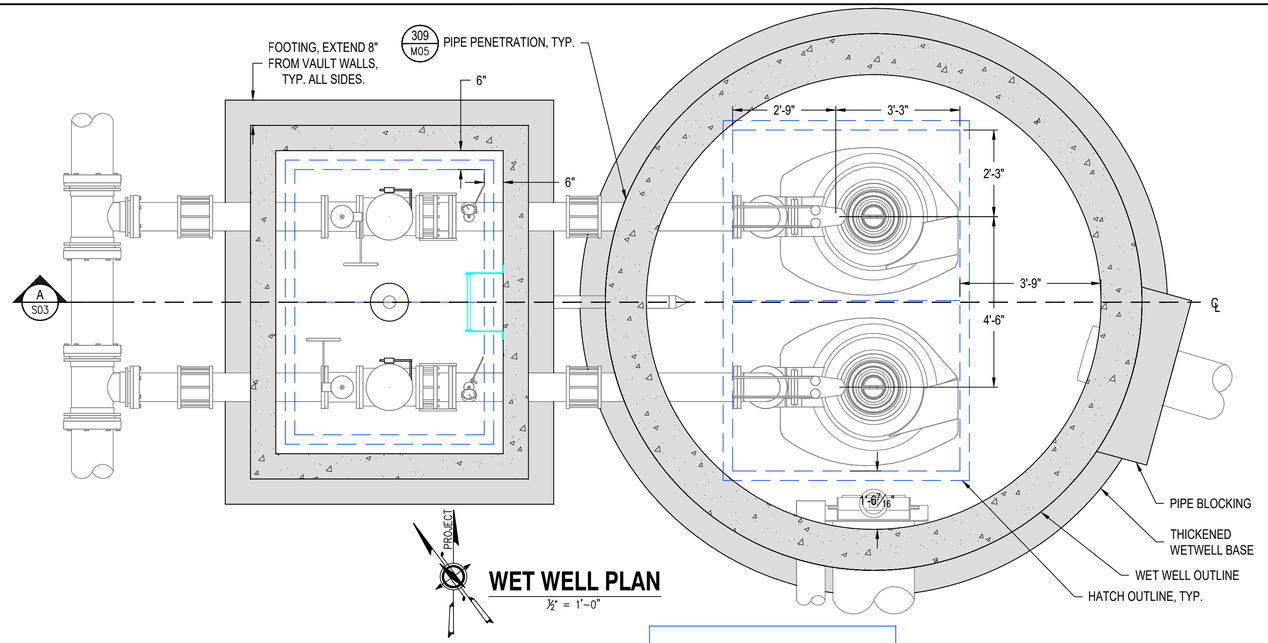
JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-STR02.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: DND
REVIEWED: JMC

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

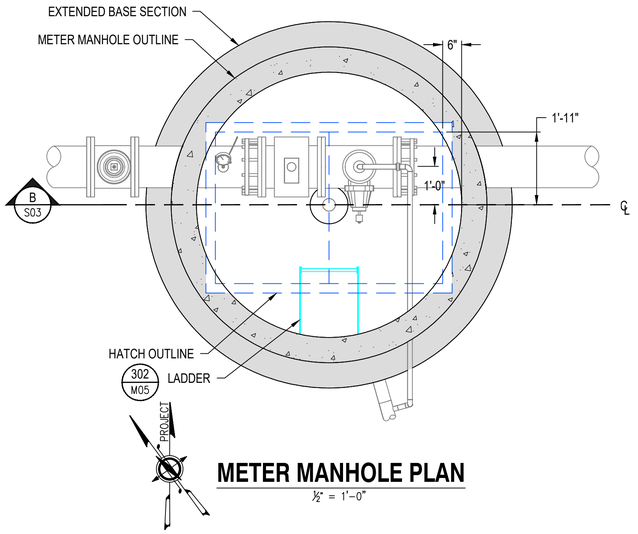
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S02
SHEET NO.: 19
48



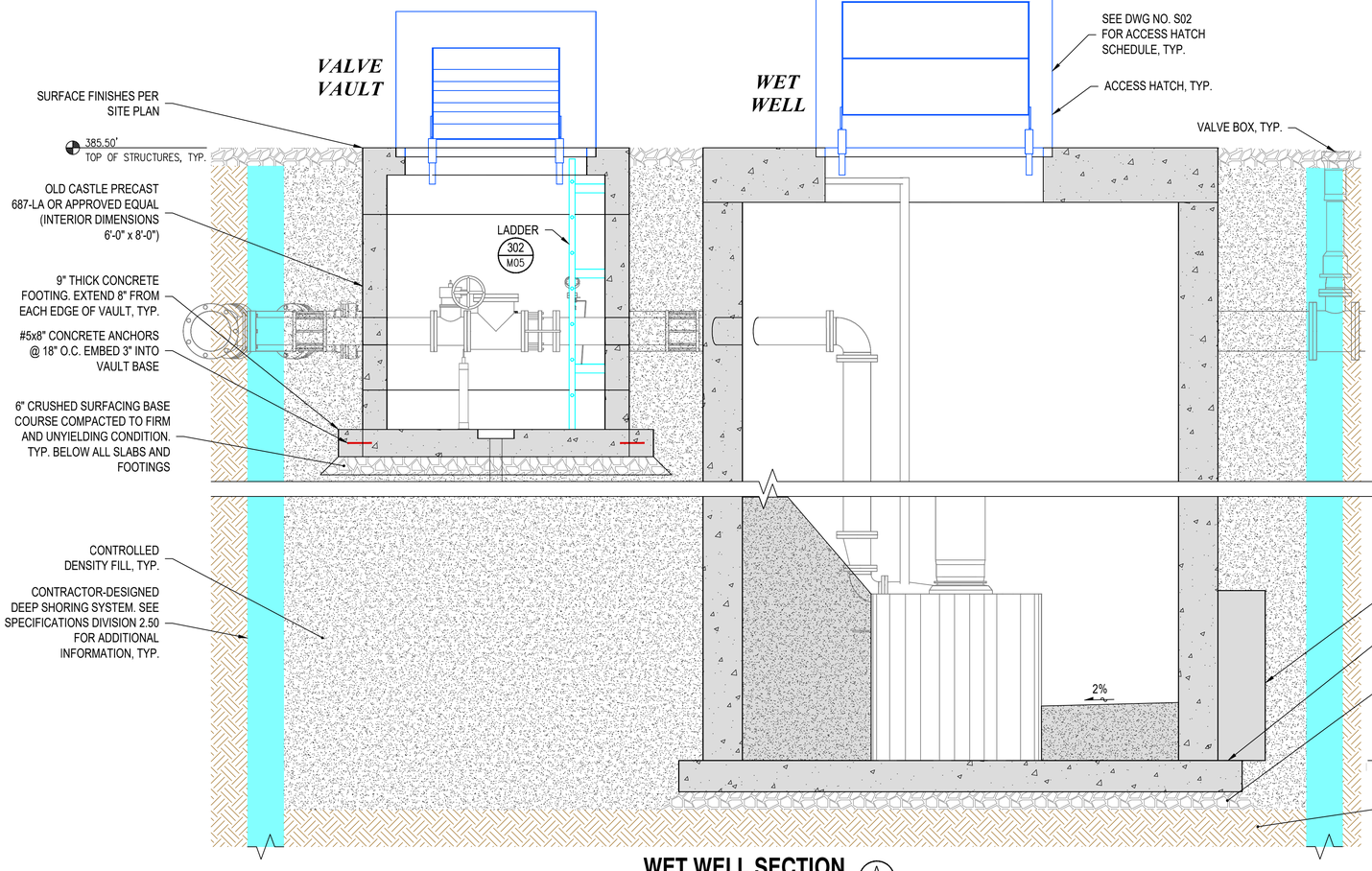
WET WELL PLAN

½" = 1'–0"



METER MANHOLE PLAN

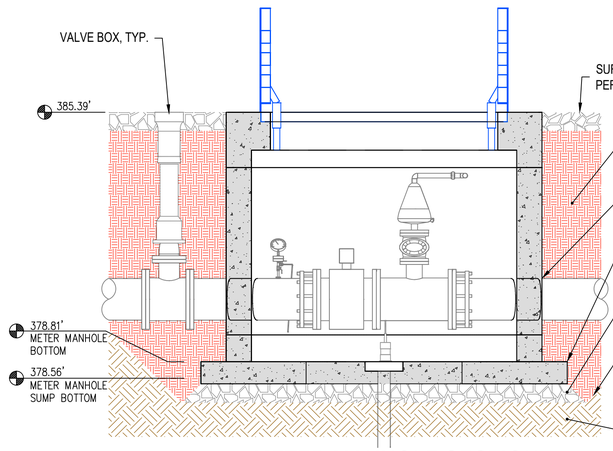
½" = 1'–0"



WET WELL SECTION

A S03

½" = 1'–0"



METER MANHOLE SECTION

B S03

½" = 1'–0"

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SIGNED: 03/27/19

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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STRUCTURAL SECTIONS I

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	OMP
			RLF

ENGINEER: DND
REVIEWED: JMC
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-STR03.DWG
JOB NO.: 117-088

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S03
SHEET NO.: 20
48

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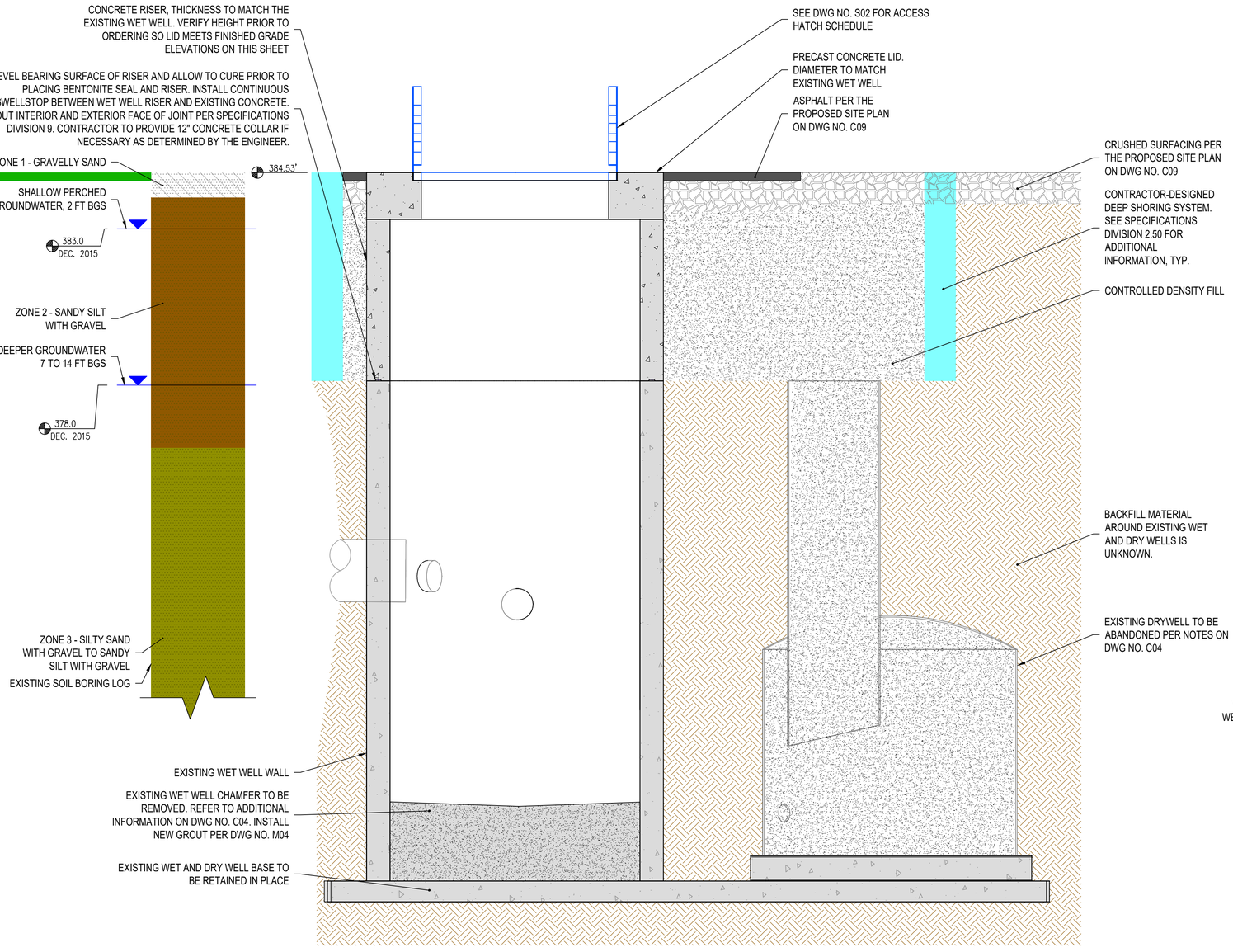
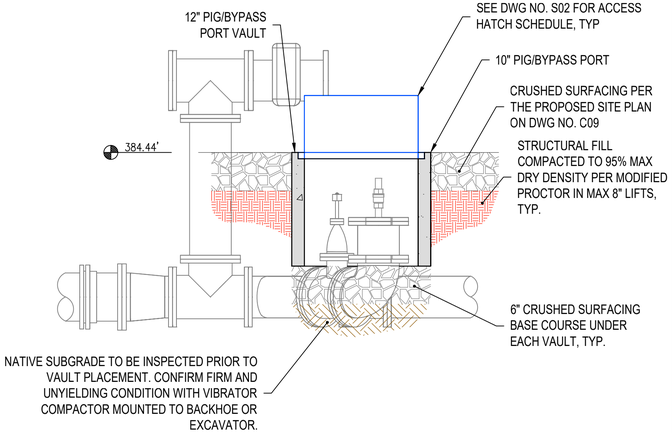
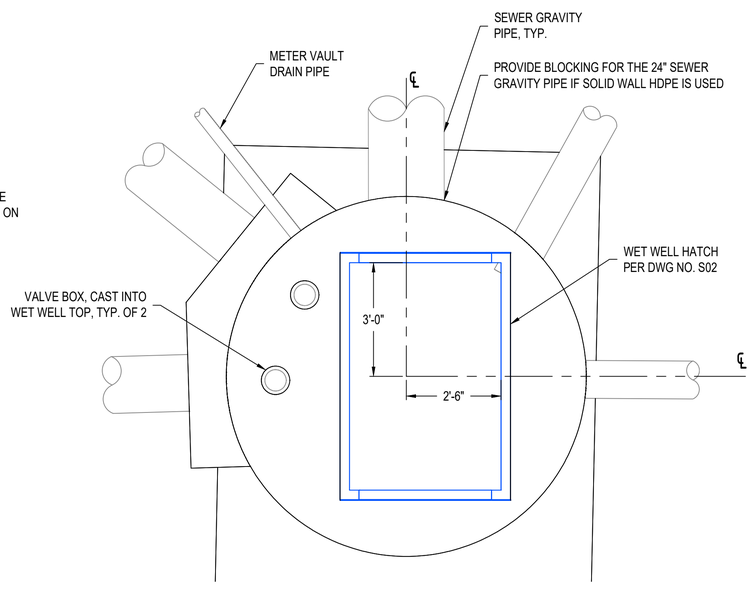


EXISTING WET WELL MODIFICATIONS (A / S02)
½" = 1'–0"



PIG/BYPASS PORT SECTION (B / S02)
½" = 1'–0"



EXISTING WET WELL PLAN
½" = 1'–0"

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

STRUCTURAL SECTIONS II

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	OMP
			RLF

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-STR03.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: DND
REVIEWED: JMC

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S04
SHEET NO.: 21
48

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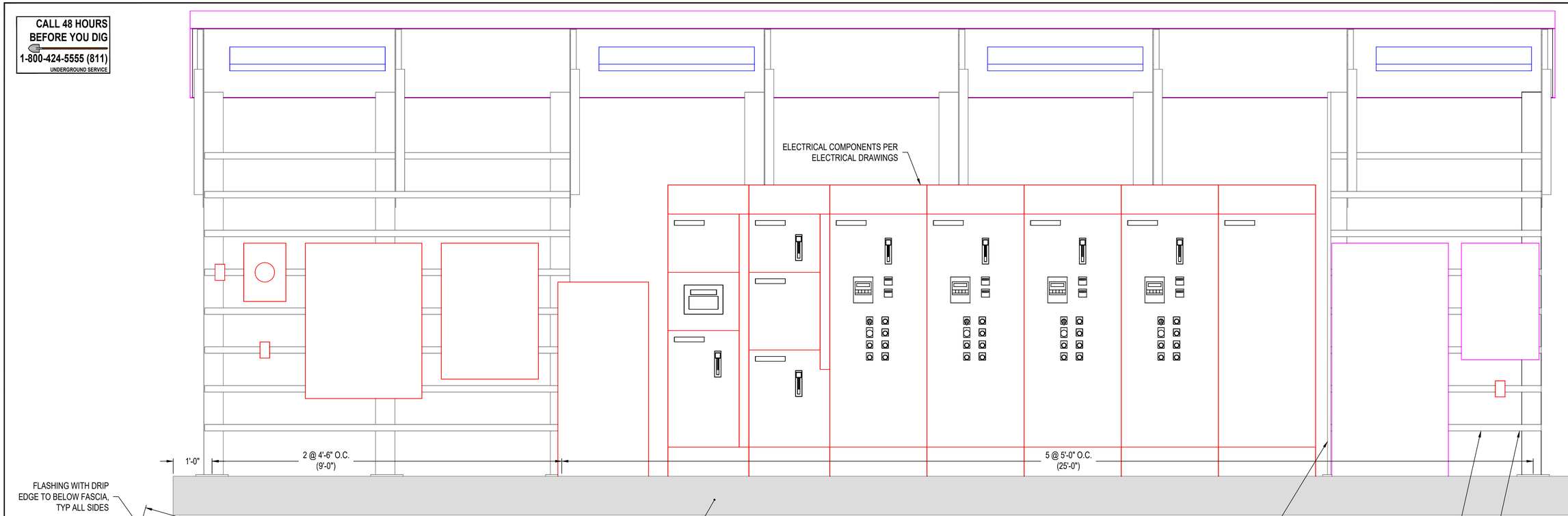
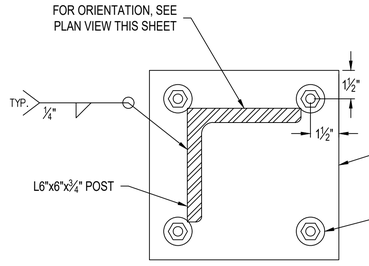
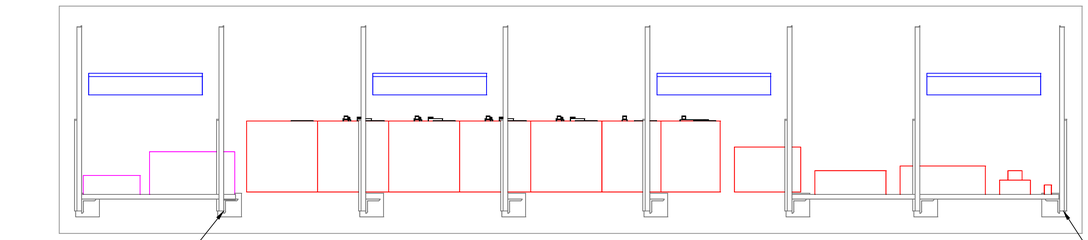


ELECTRICAL SHELTER FRONT ELEVATION
¾" = 1'-0"

ELECTRICAL SHELTER SIDE ELEVATION
¾" = 1'-0"



BASE PLATE DETAIL
3" = 1'-0"



ELECTRICAL SHELTER PLAN
⅜" = 1'-0"

PROJECT

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

ELECTRICAL SHELTER STRUCTURAL DETAILS

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR BIDDING	03/27/19	OMP
			RJF

REVISIONS

ENGINEER: DND
REVIEWED: JMC
DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-STR04.DWG
JOB NO.: 117-088

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: S05
SHEET NO.: 22
48

GENERAL MECHANICAL NOTES

1. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT, MATERIALS, LABOR, AND EXPERTISE TO CONSTRUCT MAJOR AND MINOR PIPING SYSTEMS ACCORDING TO APPLICABLE CODES, STANDARDS, AND MANUFACTURER RECOMMENDATIONS.
2. CONTRACTOR SHALL CONFORM TO PIPE ROUTING AND ARRANGEMENT AS CLOSELY AS POSSIBLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFY ALL PIPING DIMENSIONS. CONTRACTOR SHALL PREPARE AND SUBMIT DETAILED DIMENSIONAL DRAWINGS BASED ON APPROVED EQUIPMENT AND PIPING SYSTEMS.
3. NOT ALL PIPING, VALVES, FITTING AND ACCESSORIES ARE SHOWN. PROVIDE ALL PIPE, VALVES, AND ACCESSORIES AS SHOWN ON THE PROCESS AND INSTRUMENTATION (P&ID) DRAWINGS EVEN THOUGH NOT SHOWN ON MECHANICAL DRAWINGS.
4. FITTINGS AND/OR PIPING THAT MAY BE REQUIRED IN ORDER TO OPERATE SOME MINOR MECHANICAL SYSTEMS, INSTRUMENTATION, AND EQUIPMENT MAY NOT BE SHOWN IN THE PLANS. THE CONTRACTOR SHALL PROVIDE FITTINGS AND PIPING AS NECESSARY TO HAVE A COMPLETE AND FUNCTIONAL SYSTEM.
5. CONTRACTOR SHALL CONNECT EQUIPMENT, VALVES, METERS, AND OTHER SIMILAR FITTINGS TO PIPING SYSTEM SUCH THAT IT CAN BE READILY DISASSEMBLED FOR MAINTENANCE OF THE EQUIPMENT. THIS MAY REQUIRE PROVIDING ADDITIONAL FITTINGS OR SUPPORTS NOT SHOWN IN THE PLANS.
6. DISMANTLING JOINTS OR FLANGE COUPLING ADAPTORS WITH SHACKLE RODS MAY BE ADDED WITH ENGINEER APPROVAL TO FACILITATE PIPE ASSEMBLY.
7. CONTRACTOR SHALL PROVIDE VALVED VENTS AT HIGH POINTS AND VALVED DRAINS AT LOW POINTS AND ALL OTHER LOCATIONS AS NECESSARY TO SUCCESSFULLY TEST PIPING SYSTEMS.
8. PIPING, VALVES, SUPPORTS, AND OTHER APPURTENANCE HARDWARE THAT WILL BE SUBMERGED DURING NORMAL OPERATING CONDITIONS SHALL BE STAINLESS STEEL, UNLESS OTHERWISE NOTED.
9. NOT ALL PIPE SUPPORTS ARE SHOWN IN THE PLANS. CONTRACTOR SHALL PROVIDE AND INSTALL PIPE SUPPORTS AS NECESSARY TO PROVIDE A RIGID, SECURE, NON-SAGGING SYSTEM. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. FITTING TAPS SHALL BE DONE AT THE FACTORY. PIPE TAPS MAY BE DONE ON SITE USING A TAPPING MACHINE BY AN EXPERIENCED OPERATOR. ALL TAPS ARE SUBJECT TO OWNER APPROVAL AND ANY REJECTED MATERIALS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. TAPPED DI PIPE SHALL BE CLASS 53 MINIMUM. DIRECT TAPS ON PIPE ARE TO BE LOCATED SUCH THAT ADJACENT FITTING BOLTS OR SHACKLE RODS DO NOT INTERFERE WITH INSTALLATION OF GAUGES, SWITCHES OR AIR VALVES. TAPPED PIPE WILL BE REJECTED IF EQUIPMENT CANNOT BE INSTALLED CLEANLY AND DISASSEMBLED EASILY.
11. MINOR MECHANICAL PIPING: ALL VALVES 2" AND LARGER SHALL INCLUDE HANDWHEEL OPERATORS. ALL BALL VALVES SMALLER THAN 2" SHALL HAVE ¼ TURN FULL HANDLES AND BE RATED FOR 300psi WORKING PRESSURE.
12. PLUMB ALL CONTROL VALVE PILOT DRAINS, AIR VALVE OUTLETS, AND PUMP HEAD DRAINS TO FLOOR DRAINS USING COPPER AND COMPRESSION FITTINGS OR SCH 40 PVC PIPE AND FITTINGS. SECURE TO PIPE RUNS OR SUPPORTS AWAY FROM TRAVELED PATHS. PROVIDE UNIONS OR COUPLINGS AS NECESSARY TO ALLOW COMPLETE DISASSEMBLY. MAINTAIN CONTINUOUS DRAINING GRADE ON PIPE RUNS.
13. CONTRACTOR SHALL PROVIDE ALL NECESSARY THRUST RESTRAINT, INCLUDING BUT NOT LIMITED TO CONCRETE BLOCKING, SHACKLE RODS MECHANICAL THRUST RESTRAINT (MEGALUGS OR EQUAL) AND TRUE RESTRAINED JOINT PIPE (TRJ) PIPE.
14. IN THE EVENT THAT A SECTION OF PIPING FAILS A PRESSURE TEST, AND ANY MECHANICAL JOINTS WITH MEGA-LUG STYLE RESTRAINTS NEED TO BE DISASSEMBLED, THE MEGA-LUGS AND THE ASSOCIATED PIPE MAY NOT BE REUSED AND MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE.
15. CONTRACTOR SHALL PROVIDE INSULATING FLANGE KITS OR TRANSITION COUPLINGS BETWEEN ALL DISSIMILAR PIPING MATERIALS.
16. ALL FLOW METERS SHALL BE INSTALLED SO THAT THERE IS A MINIMUM STRAIGHT RUN LENGTH OF 5 PIPE DIAMETERS UPSTREAM AND 2 PIPE DIAMETERS DOWNSTREAM.
17. ALL PVC FITTINGS SHALL BE SOCKET END-TYPE FITTINGS UNLESS OTHERWISE NOTED.
18. ALL BUTTERFLY VALVES (BFV) SHALL BE FULL LUG WAFER STYLE, UNLESS OTHERWISE NOTED.
19. ALL VALVES SHALL BE REMOVABLE WITHOUT HAVING TO CUT PIPE.
20. FLANGE COUPLING ADAPTERS (FCA), RESTRAINED FLANGE COUPLING ADAPTERS (RFCA), AND COUPLINGS SHALL BE EQUAL TO ROMAC.
21. ALL PRESSURE PIPE SHALL HAVE RESTRAINED JOINTS. EXPOSED PIPING SHALL BE FLANGED OR GROOVED; BURIED PIPING SHALL BE MECHANICALLY RESTRAINED JOINTS. PUSH ON JOINTS WITH FIELD LOK (OR APPROVED EQUAL) ARE ACCEPTABLE RESTRAINED JOINT IN STRAIGHT SECTIONS WITH BLOCKING OR RESTRAINED FITTINGS AS SPECIFIED. PROVIDE TRUE (BOLTLESS) RESTRAINED JOINT PIPE AND CONCRETE BLOCKING WHERE SPECIFIED ON PLANS.
22. PIPING WHICH NORMALLY OPERATES UNDER FULL CONDITIONS WITH HYDROSTATIC HEAD HIGHER THAN THE CROWN OF THE PIPE SHALL BE CONSIDERED PRESSURE PIPING. PIPING WHICH NORMALLY OPERATES AT A HYDROSTATIC HEAD NO HIGHER THAN THE PIPE CROWN SHALL BE CONSIDERED GRAVITY PIPELINES. ALL PIPING SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED (WHERE APPLICABLE) IN ACCORDANCE WITH THE GUIDELINES IDENTIFIED IN THE SPECIFICATIONS.
23. UNLESS OTHERWISE NOTED, PIPE MATERIAL SHALL BE USED BASED ON PIPE FUNCTION AND AS SPECIFIED IN THE PIPE SCHEDULE (SEE SPECIFICATIONS). PREPARE AND COAT ALL EXPOSED PIPING PER THE FINISHES SECTION OF THE SPECIFICATIONS.
24. ALL PIPE PENETRATIONS SHALL BE SEALED WATERTIGHT.
25. HEAT TRACE AND INSULATE ALL ABOVE GRADE, EXPOSED WATER AND FLUID PROCESS PIPES TO 3' BELOW GRADE.
26. COPPER PIPING MAY BE USED IN LIEU OF SCH 40 PVC FOR PLUMBING WATER SUPPLY LINES.
27. ABS MAY BE USED IN LIEU OF SCH 40 PVC FOR PLUMBING DRAIN, WASTE, VENT LINES.

MAJOR MECHANICAL LEGEND

PIPE AND PIPE JOINING (PLAN VIEW)

FL x FL | FL x =TRJ | FL x PE | FL x GR — PIPE SPOOL

ADAPTER, FLxMJ SHOWN. OTHER END CONFIGURATIONS WHERE REQUIRED

LONG BODY SLEEVE

FCA WITH SHACKLE RODS, SHACKLE RODS NOT SHOWN

COUPLING, TRANSITION OR RESTRAINED WHERE REQUIRED

EXPANSION JOINT WITH LIMIT RODS

PIPE SUPPORTS (PLAN VIEW)

STAND-ON/CONCRETE

OTHER PIPING SYMBOLS

PIPE FLOW ARROW (COLOR BY PIPE FUNCTION)

FITTINGS (PLAN VIEW)

FLANGED | MECHANICAL | GROOVED | SOCKET

90° BEND/ELBOW

45° BEND/ELBOW

22½° BEND/ELBOW

11¼° BEND/ELBOW

REDUCER

CROSS

TEE

WYE

VALVES AND METERS (PLAN VIEW)

ECCENTRIC (PLUG) VALVE, FULL PORT

GATE VALVE

BUTTERFLY VALVE (W/ HANDWHEEL AND WAFER W/ LEVER SHOWN)

ELECTROMAGNETIC FLOWMETER

GENERAL PIPE SUPPORT NOTES

TABLE A: PIPE SUPPORT DESIGN CRITERIA

PIPE SIZE	ROD SIZE	DUCTILE IRON MAX. SPAN FOR PIPE SUPPORTS (FT)
8"	7/8"	10
10"	7/8"	10
12"	7/8"	10
24"	1-1/2"	10

1. FOR PIPE SIZES THAT ARE NOT LISTED IN ABOVE TABLE, THE NEXT LARGER PIPE SIZE SHALL BE USED FOR DETERMINING LOADING AND SUPPORT SPACING.
2. ROD SIZE IS BASED ON CARRYING SINGLE PIPE. WHEN MORE THAN ONE PIPE IS TO BE SUPPORTED, RODS SHALL BE SIZED USING SUM OF DESIGN WEIGHTS TO DETERMINE TOTAL LOAD.
3. INSTALL AT LEAST ONE HANGER PER PIPE LENGTH. LOCATE AS NEAR THE END CONNECTION AS POSSIBLE.
4. PROVIDE TURNBUCKLE WITH SUPPORT ROD FOR PIPES SUBJECT TO HORIZONTAL MOVEMENT.
5. PROVIDE LATERAL AND SEISMIC BRACING AS SPECIFIED & REQUIRED.
6. ALL CONNECTIONS TO CONCRETE SHALL BE CONCRETE ANCHORS PER SPECIFICATIONS & STRUCTURAL DETAILS.
7. MSS REFERS TO MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY, STANDARD PRACTICE SP 58 AND SP 69.
8. IF SUPPORT IS SUBMERGED OR LOCATED BELOW THE TOP OF THE WALL WITHIN A WATER BEARING STRUCTURE, ALL HARDWARE AND SUPPORT MATERIAL SHALL BE STAINLESS STEEL. IN ALL OTHER AREAS, MATERIALS SHALL BE HOT-DIP GALVANIZED UNLESS NOTED OTHERWISE.
9. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT, MATERIALS, AND LABOR FOR CONSTRUCTING PIPE SUPPORT SYSTEMS.
10. PIPE SUPPORT SYSTEMS AS DETAILED PROVIDE GENERAL GUIDELINES FOR HOW PIPES SHALL BE SUPPORTED. ADDITIONAL SUPPORT CONFIGURATIONS MAY BE REQUIRED. CONTRACTOR SHALL SUBMIT ALTERNATE SUPPORT DETAILS FOR APPROVAL.
11. CONTRACTOR SHALL PROVIDE SUPPORTS AS NEEDED TO SECURE PIPING SYSTEM IN NORMAL AND TEST OPERATING CONDITIONS.
12. CONTRACTOR IS RESPONSIBLE FOR DESIGN OF PIPE SUPPORTS, HANGERS AND SEISMIC BRACING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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RICHARD L. BALLARD — STATE OF WASHINGTON — 52878 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

EDWIN HARLAN — STATE OF WASHINGTON — 38889 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

LYNNWOOD WASHINGTON

MECHANICAL GENERAL NOTES AND DETAILS

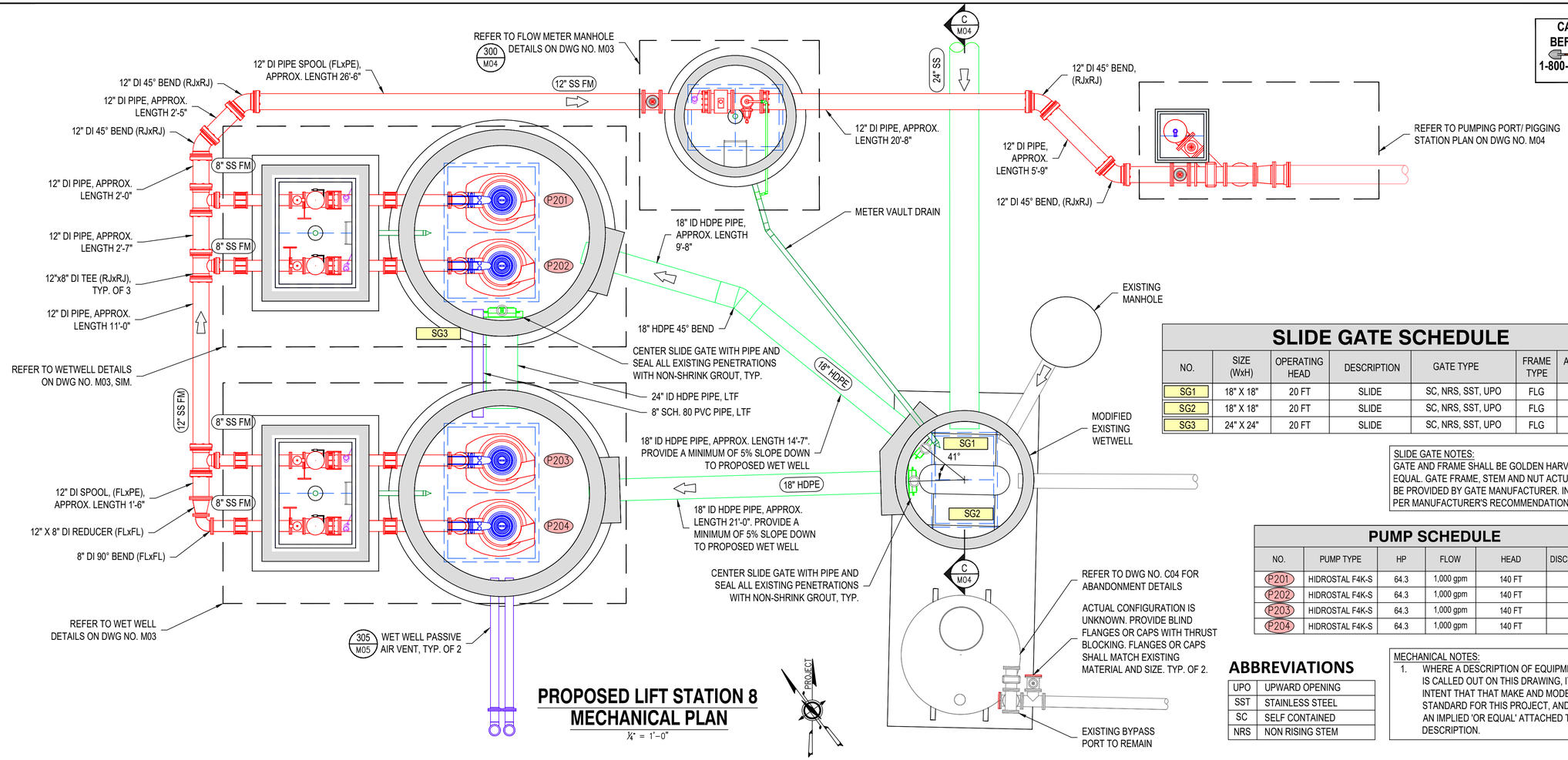
ENGINEER: BMS | REVIEWED: RJF
DATE: Mar 26, 2019 | PLOT DATE: Mar 26, 2019
CLIENT: LYNN | FILENAME: LS8-D-MEC03.DWG
JOB NO.: 117-098

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: M01
SHEET NO.: 23
48



PROPOSED LIFT STATION 8 MECHANICAL PLAN

1/4" = 1'-0"

SLIDE GATE SCHEDULE

NO.	SIZE (WxH)	OPERATING HEAD	DESCRIPTION	GATE TYPE	FRAME TYPE	ACTUATOR TYPE
SG1	18" X 18"	20 FT	SLIDE	SC, NRS, SST, UPO	FLG	NUT
SG2	18" X 18"	20 FT	SLIDE	SC, NRS, SST, UPO	FLG	NUT
SG3	24" X 24"	20 FT	SLIDE	SC, NRS, SST, UPO	FLG	NUT

SLIDE GATE NOTES:
GATE AND FRAME SHALL BE GOLDEN HARVEST OR EQUAL. GATE FRAME, STEM AND NUT ACTUATOR TO BE PROVIDED BY GATE MANUFACTURER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

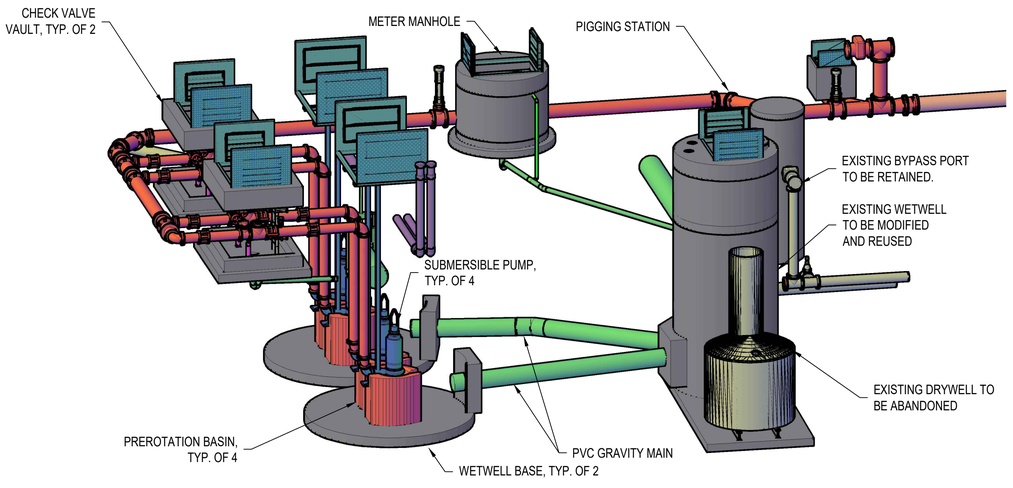
PUMP SCHEDULE

NO.	PUMP TYPE	HP	FLOW	HEAD	DISCHARGE SIZE
P201	HIDROSTAL F4K-S	64.3	1,000 gpm	140 FT	4"
P202	HIDROSTAL F4K-S	64.3	1,000 gpm	140 FT	4"
P203	HIDROSTAL F4K-S	64.3	1,000 gpm	140 FT	4"
P204	HIDROSTAL F4K-S	64.3	1,000 gpm	140 FT	4"

ABBREVIATIONS

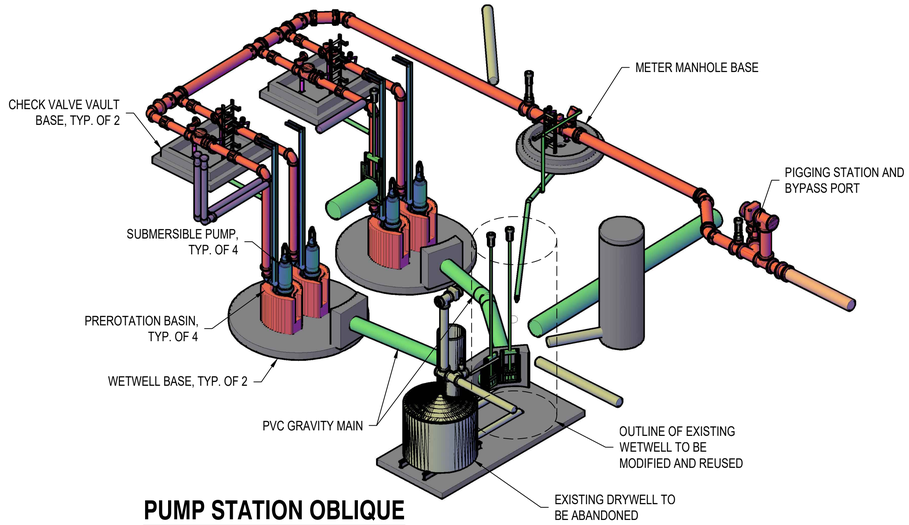
UPO	UPWARD OPENING
SST	STAINLESS STEEL
SC	SELF CONTAINED
NRS	NON RISING STEM

MECHANICAL NOTES:
1. WHERE A DESCRIPTION OF EQUIPMENT, ETC. IS CALLED OUT ON THIS DRAWING, IT IS THE INTENT THAT THAT MAKE AND MODEL IS THE STANDARD FOR THIS PROJECT, AND THERE IS AN IMPLIED 'OR EQUAL' ATTACHED TO THE DESCRIPTION.



PUMP STATION OBLIQUE

NOT TO SCALE



PUMP STATION OBLIQUE

NOT TO SCALE

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

EXISTING AND PROPOSED MECHANICAL PLAN

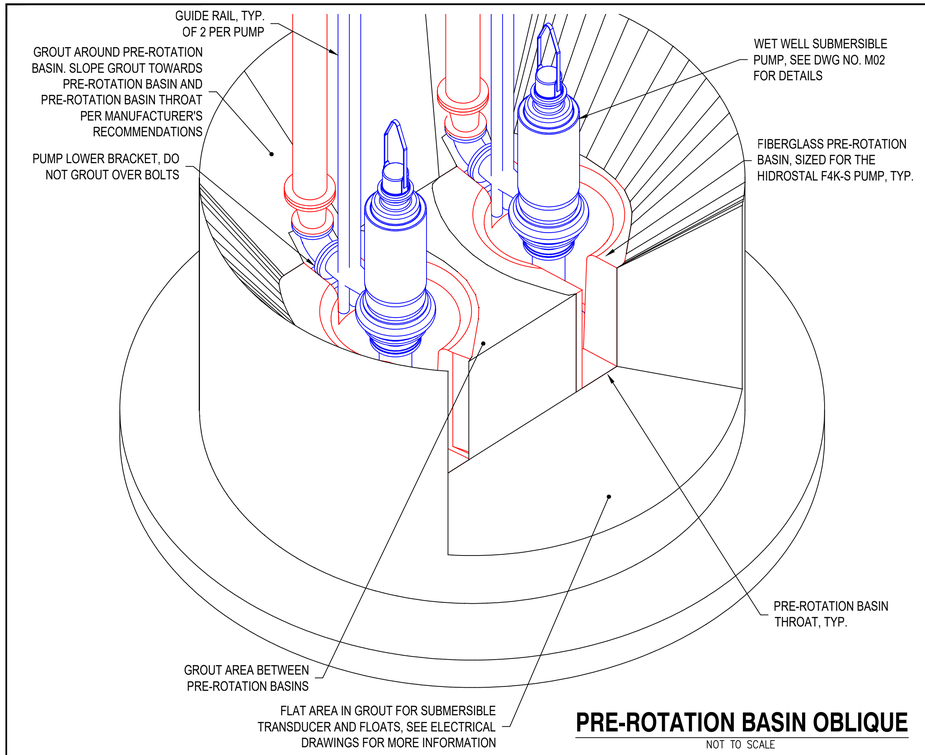
LYNNWOOD WASHINGTON

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	RJF

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-MEC01.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: BMS
REVIEWED: RJF
DRAWN: OMP
REVIEW: RJF

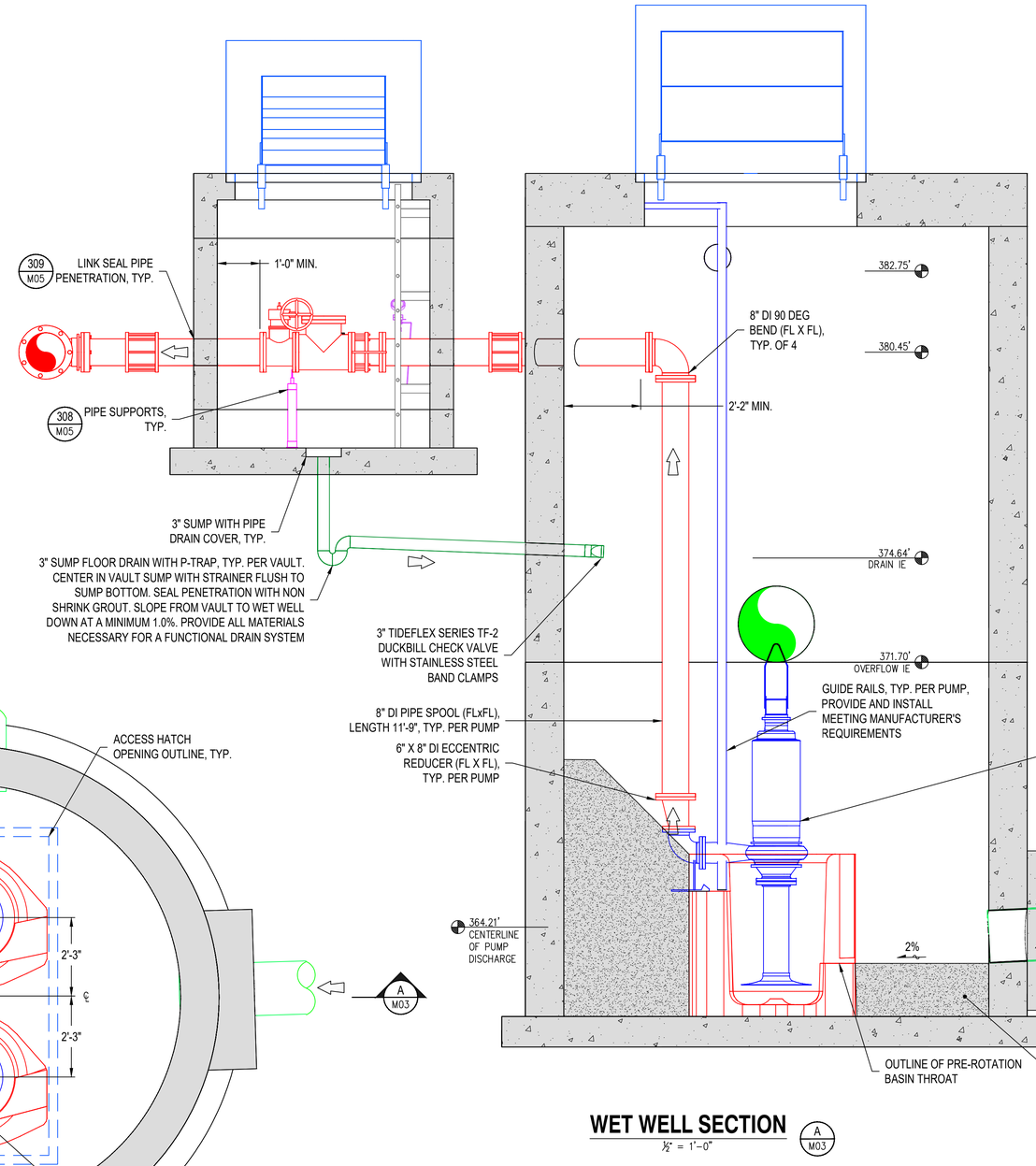
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: M02
SHEET NO.: 24
48



PRE-ROTATION BASIN OBLIQUE

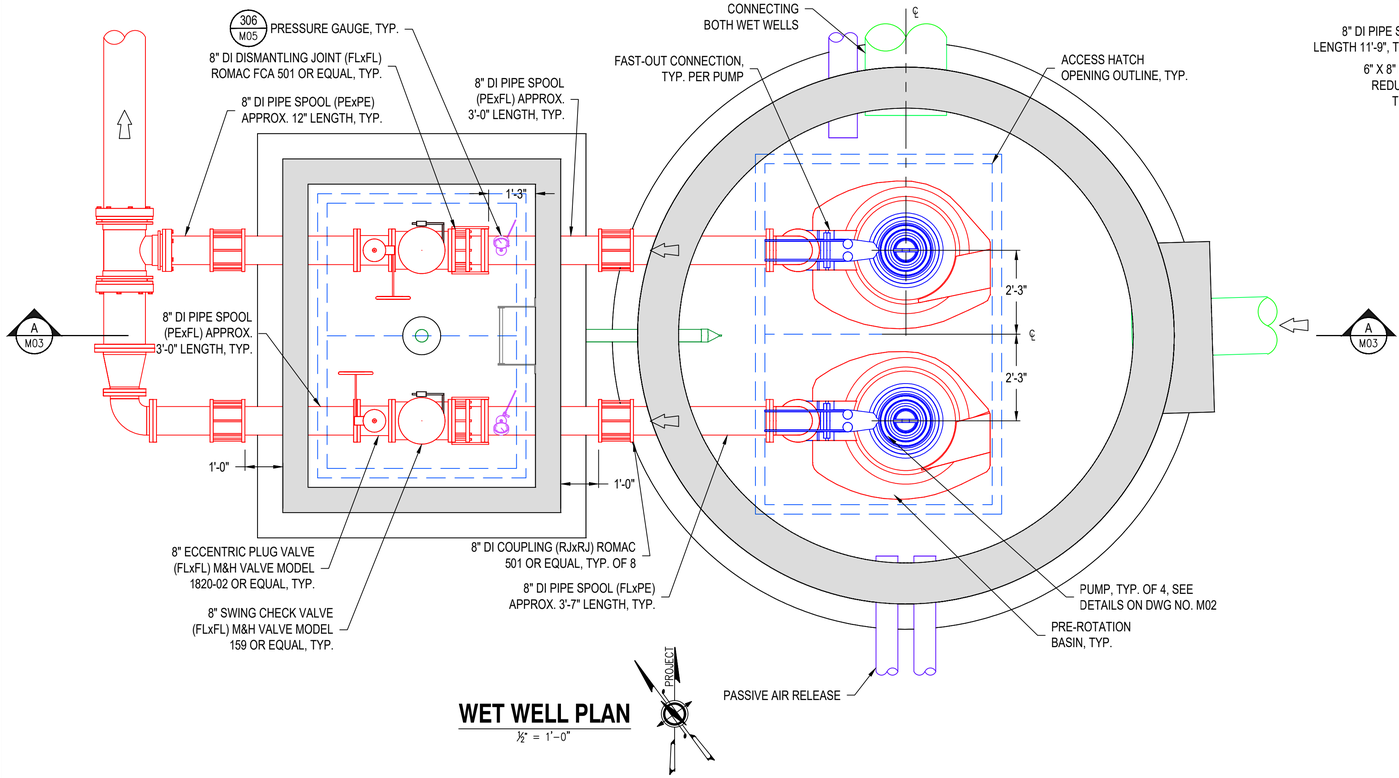
NOT TO SCALE



WET WELL SECTION

A M03

½" = 1'-0"



WET WELL PLAN

½" = 1'-0"

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EDWIN HALLMARK STATE OF WASHINGTON 38889 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

LYNNWOOD WASHINGTON

MECHANICAL SECTIONS AND DETAILS I

REVISIONS				
NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-MEC01.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: BMS
REVIEWED: RJF

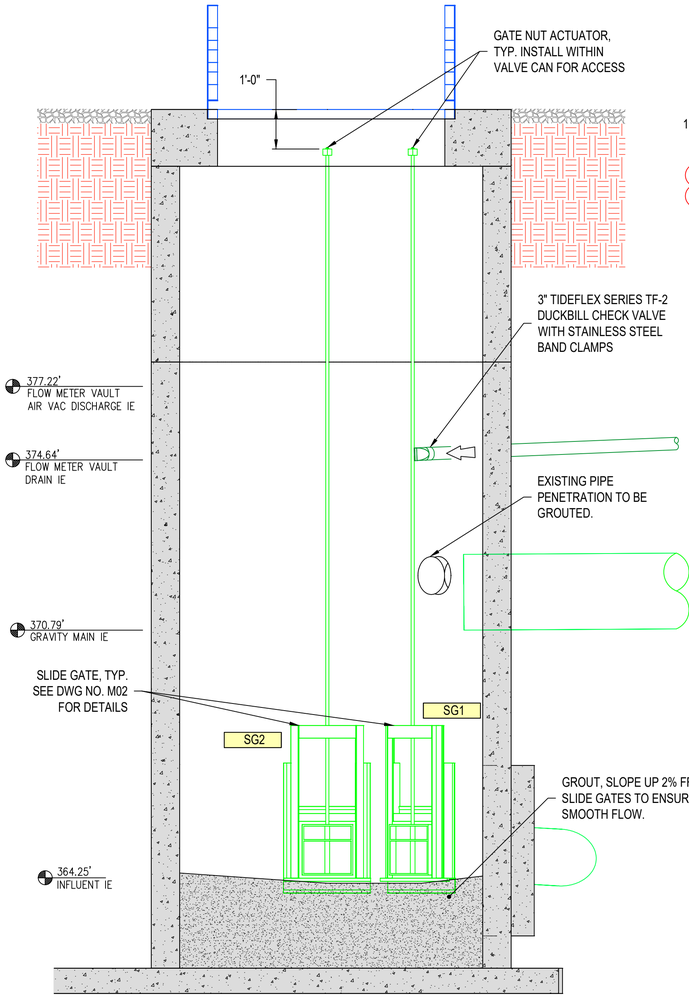
SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: M03
SHEET NO.: 25 48

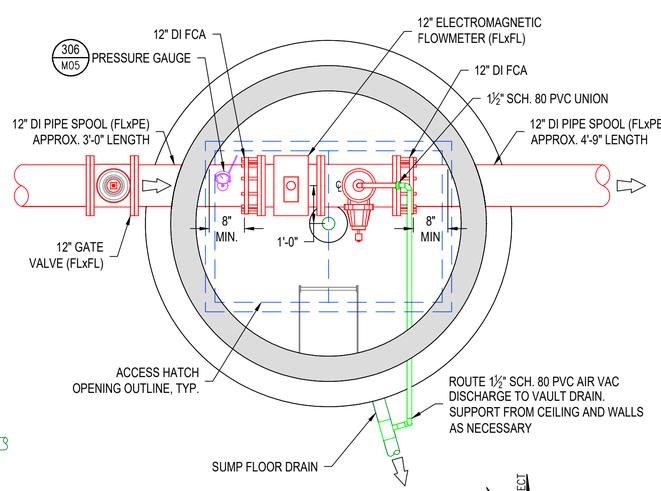
CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555 (811)
UNDERGROUND SERVICE



MODIFIED EXISTING WET WELL SECTION

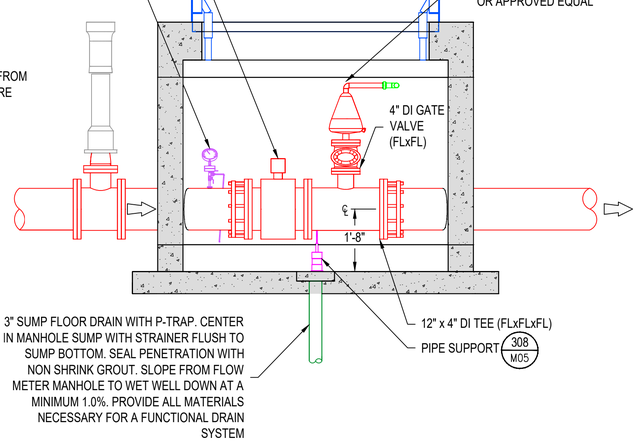
½" = 1'–0"

C / M02



FLOW METER MANHOLE PLAN

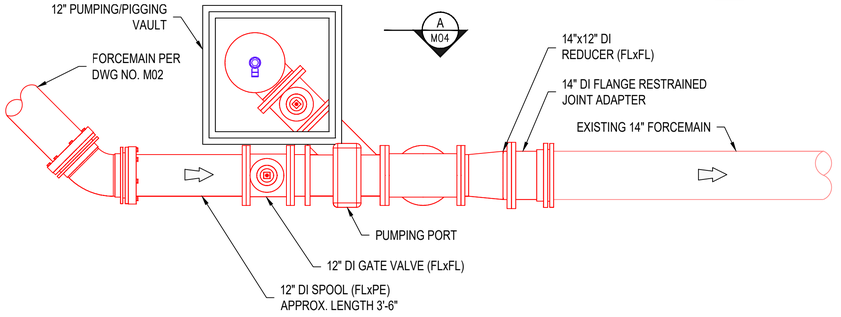
½" = 1'–0"



FLOW METER MANHOLE SECTION

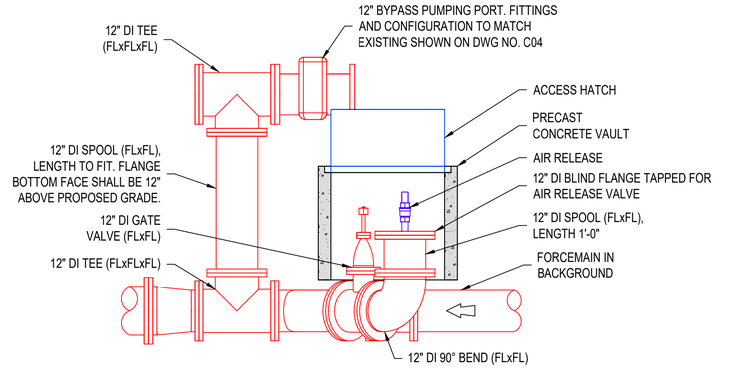
300 / M02

½" = 1'–0"



PUMPING PORT/PIGGING STATION PLAN

½" = 1'–0"



A / M04 *SECTION A*

PUMPING PORT/PIGGING STATION SECTION

½" = 1'–0"

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

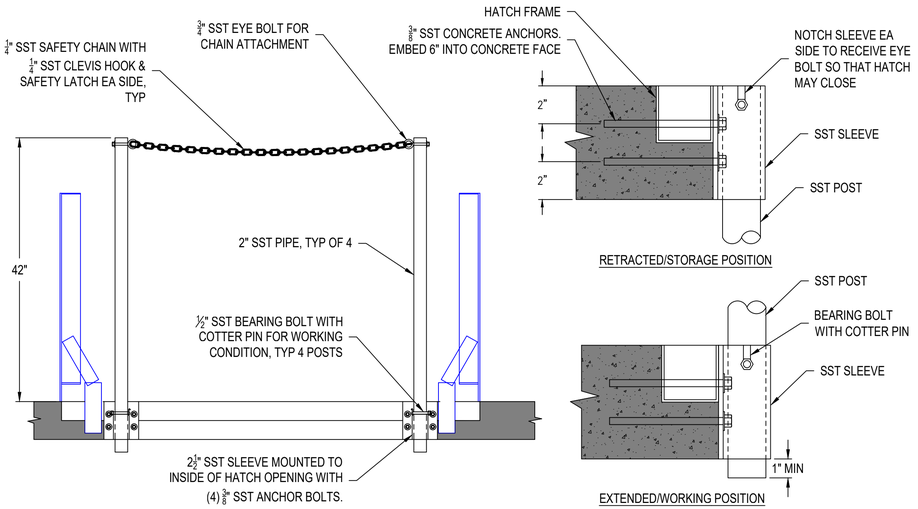
MECHANICAL SECTIONS AND DETAILS II

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	03/27/19	ISSUED FOR BIDDING	OMP
			RJF
			REVIEW

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-MEC01.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: BMS
REVIEWED: RJF

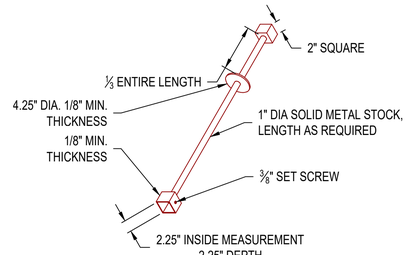
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: M04
SHEET NO.: 26
48

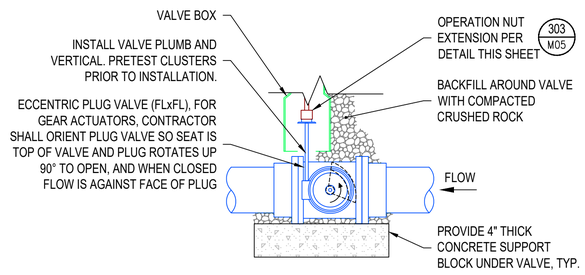


NOTE:
1. ALL HARDWARE FASTENERS, CHAINS AND POSTS SHALL BE STAINLESS STEEL. THE POSTS INSIDE THE VALVE VAULT CAN BE GALVANIZED.
2. LOCATE SLEEVES TO NOT INTERFERE WITH HATCH CLOSING.
3. SAFETY CHAIN SHALL COVER ALL 4 SIDES OF HATCH OPENINGS ON THE VALVE VAULT.

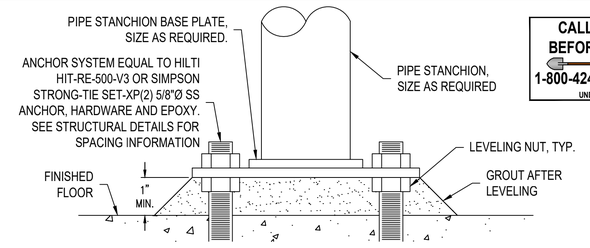
ACCESS HATCH SAFETY CHAIN DETAILS (301 TYP.)
NOT TO SCALE



OPERATING NUT EXTENSION (303 TYP.)
NOT TO SCALE

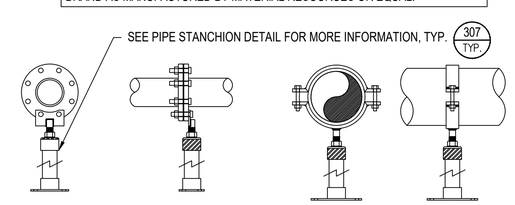


ISOLATION VALVE DETAIL (304 TYP.)
NOT TO SCALE



PIPE STANCHION DETAIL (307 TYP.)
NOT TO SCALE

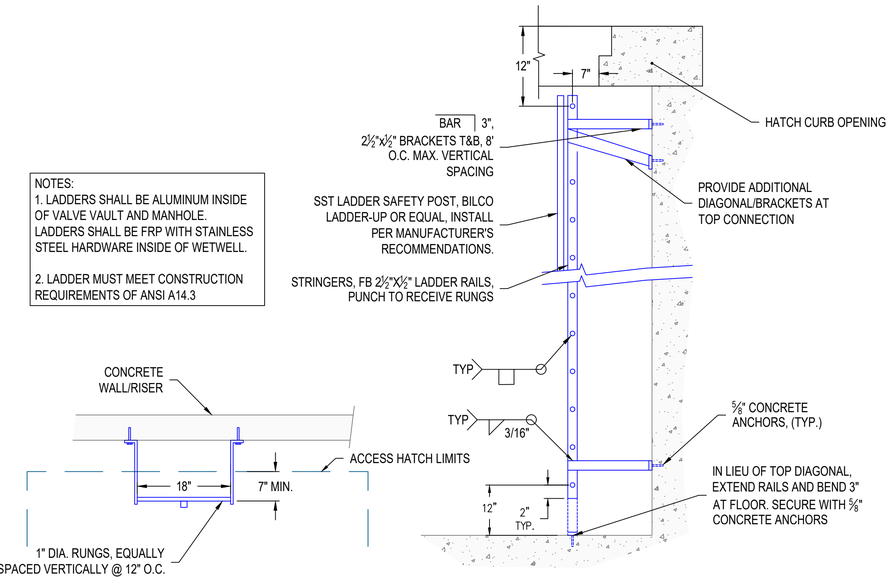
NOTE: FLANGE, SADDLE, AND SADDLE CLAMP SUPPORTS SHALL BE "STANDON" BRAND AS MANUFACTURED BY MATERIAL RESOURCES OR EQUAL.



TYPE A - FLANGE SUPPORT
(TYP. AT VALVES, METERS, AND FITTINGS)

TYPE C - SADDLE CLAMP SUPPORT
(TYP. AT PIPING)

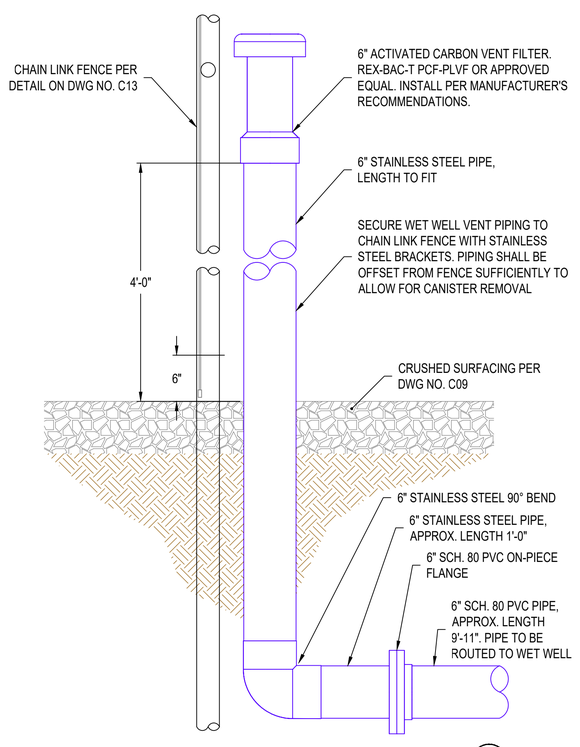
PIPE SUPPORT (308 TYP.)
NOT TO SCALE



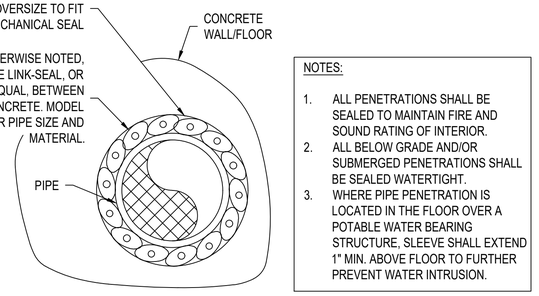
NOTES:
1. LADDERS SHALL BE ALUMINUM INSIDE OF VALVE VAULT AND MANHOLE. LADDERS SHALL BE FRP WITH STAINLESS STEEL HARDWARE INSIDE OF WETWELL.
2. LADDER MUST MEET CONSTRUCTION REQUIREMENTS OF ANSI A14.3

PLAN **PROFILE**

VAULT ACCESS LADDER (302 TYP.)
NOT TO SCALE



WET WELL PASSIVE VENT DETAILS (305 TYP.)
NOT TO SCALE

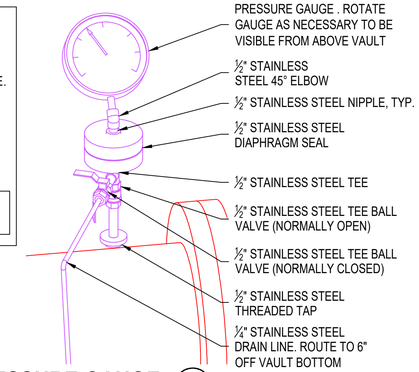


NOTES:
1. ALL PENETRATIONS SHALL BE SEALED TO MAINTAIN FIRE AND SOUND RATING OF INTERIOR.
2. ALL BELOW GRADE AND/OR SUBMERGED PENETRATIONS SHALL BE SEALED WATERTIGHT.
3. WHERE PIPE PENETRATION IS LOCATED IN THE FLOOR OVER A POTABLE WATER BEARING STRUCTURE, SLEEVE SHALL EXTEND 1" MIN. ABOVE FLOOR TO FURTHER PREVENT WATER INTRUSION.

MECHANICAL SEAL PIPE PENETRATION (309 TYP.)
NOT TO SCALE

NOTE:
1. GAUGES SHALL BE ANALOG, STEM MOUNTED TYPE W/ 4 ½ SCALE FACE, GLYCERIN FILLED AND COMPLETELY SUITABLE FOR MEASURING RAW SEWAGE.
2. CONNECTION SHALL BE ½" THREADED.
3. GAUGE ACCURACY SHALL BE ± 0.5% OF FULL SCALE.
4. THE FULL SCALE PRESSURE RANGE FOR EACH GAUGE LOCATION SHALL BE AS FOLLOWS:

FULL SCALE	NORMAL OPERATION RANGE
0-200 psi	55-65 psi



PRESSURE GAUGE (306 TYP.)
NOT TO SCALE

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

MECHANICAL DETAILS

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-MEC03.DWG
SAVE DATE: Mar 26, 2019
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ENGINEER: BMS
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REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: M05
SHEET NO.: 27
48

ONE-LINE DIAGRAM SYMBOLS

- CIRCUIT BREAKER
  XXX/YY – CB SIZE & NO. OF POLES
  ET – ELECTRONIC TRIP
  TM – THERMAL MAGNETIC BREAKER
  MCP – MOTOR CIRCUIT PROTECTOR
  SE – SERVICE ENTRANCE
  GFI – GROUND FAULT INTERRUPTER
- FUSE
- FUSED DISCONNECT SWITCH
- PLUG–IN CONNECTION
- RTM — RUN TIME METER
- OC — MOTOR OPERATION COUNTER
- SSRVS — SSRVS – SOLID STATE REDUCED VOLTAGE STARTER
- VARIABLE FREQUENCY DRIVE
- MOTOR STARTER
- A B C D — MOTOR STARTER W/ OPERATOR DEVICES
  A – HAND–OFF–AUTO
  B – OPERATIONAL COUNTER
  C – RUN TIME METER
  D – RUN LIGHT
  E – FAIL LIGHT
  F – EMERGENCY STOP
- K — KIRK KEY INTERLOCK
- POWER TRANSFORMER
- CONTROL POWER TRANSFORMER
- TRANSFORMER
- CURRENT TRANSFORMER
- VOLTAGE TRANSFORMER
- CONTACTOR
- CAPACITOR
- ENGINE GENERATOR
- GENERATOR CONNECTION RECEPTACLE
- S/N — SOLID NEUTRAL
- TB — TERMINAL BLOCK
- SURGE PROTECTION DEVICE
- SPD — SURGE PROTECTION DEVICE (ALTERNATIVE)

GROUNDING SYSTEM SYMBOLS

- GROUND
- METAL PIPE GROUND
- CONNECTION POINT, EXOTHERMIC WELD. CADWELD OR APPROVED EQUAL.
- GROUND ROD SIZED PER N.E.C. USE EXOTHERMIC WELD CONNECTION AT THE GROUND ROD.
- PIGTAIL, BARE COPPER, LENGTH AS REQUIRED, 8' MINIMUM.
- CONNECTION POINT, MECHANICAL, COMPRESSION TYPE.

ELECTRICAL SITE PLAN SYMBOLS

- UTILITY POLE AND GUY WIRE
- HH — MANHOLE OR HANDHOLE
- P — BURIED POWER VAULT OR MANHOLE
- T — TELEPHONE VAULT OR PEDESTAL
- F — FIBER OPTICS VAULT OR PEDESTAL
- LUMINAIRE
- PAD–MOUNT TRANSFORMER

PANELBOARDS, SWITCHES, AND EQUIPMENT

- SERVICE ENTRANCE, SWITCHGEAR, MOTOR CONTROL CENTER, OR PANELBOARD
- SURFACE MOUNTED PANELBOARD
- FLUSHED MOUNTED PANELBOARD
- NXX — FIELD CONTROL STATION WITH NEMA REQUIREMENTS.
  N1 – NEMA 1
  N3R – NEMA 3R
  N4 – NEMA 4
  N4SS – NEMA 4 STAINLESS STEEL
  N4F – NEMA 4 FIBERGLASS
  N6 – NEMA 6
  N12 – NEMA 12 GASKETED
- EQUIPMENT MOUNTING STAND
- T — HEATER, WATTAGE NOTED
- EQUIPMENT CONNECTION
- M — SINGLE PHASE MOTOR. HORSEPOWER AS NOTED
- HP — THREE PHASE MOTOR. HORSEPOWER AS NOTED
- HP — SINGLE PHASE MOTOR. HORSEPOWER AS NOTED
- ELECTRICAL PLUG
- DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH
- COMBINATION MOTOR STARTER AND DISCONNECT SWITCH

RECEPTACLES AND JUNCTION BOX SYMBOLS

- J — CEILING JUNCTION BOX
- J — WALL JUNCTION BOX
- J — FLOOR JUNCTION BOX
- DUPLEX WALL RECEPTACLE , 120V
  WP = WEATHERPROOF
  G = GROUNDED
  IG = ISOLATED GROUND
  GFI = GROUND FAULT INTERRUPTER
- DOUBLE DUPLEX
- SINGLE RECEPTACLE, 120V
- SINGLE RECEPTACLE, 208V
- DUPLEX FLOOR RECEPTACLE, 120V
- SPECIAL PURPOSE WALL RECEPTACLE, RATING AS NOTED
- CLOCK
- TV — TELEVISION
- TELEPHONE
- TELEPHONE/DATA WITH CABLE
- TELEPHONE/DATA WITHOUT CABLE

SWITCH OUTLETS

- S ($) — STANDARD SWITCH, 120VAC, 20 AMP
- S3 ($) 3WAY — 3–WAY SWITCH, 120VAC, 20 AMP
- SHOA ($) HOA — 3–POSITION SWITCH, 120VAC, 20 AMP, LABEL SWITCH POSITION HAND–OFF–MOTION OR PHOTO

- SDEE — SINGLE–POLE
- S2 — DOUBLE–POLE
- S3 — THREE WAY
- S4 — FOUR WAY
- SD — DIMMER
- SP — PILOT–LIGHTED
- SK — KEY–OPERATED
- SLV — LOW VOLTAGE
- SM — MASTER
- PUSHBUTTON

LIGHTING FIXTURES/DEVICES

- FLUORESCENT FIXTURE
- WALL/CEILING MOUNTED FIXTURE
- EMERGENCY LIGHT WITH SELF CONTAINED BATTERY
- SURFACE OR PENDANT MOUNTED FIXTURE
- RECESSED FIXTURE
- MD — MOTION DETECTOR
- PC — PHOTO CONTROL CELL

FIRE SYSTEM SYMBOLS

- H — HEAT DETECTOR
- S — SMOKE DETECTOR
- D — FIRE ALARM DISPATCH STROBE ALARM
- A — FIRE ALARM AUDIBLE/VISUAL ALARM
- F — FIRE ALARM MANUAL PULL STATION

ADDITIONAL SYMBOLS

- S — SOUND SYSTEM SPEAKER
- V — SOUND SYSTEM VOLUME CONTROL
- B — DOORBELL

VALVE SYMBOLS

- PILOT VALVE SOLENOID
- VALVE
- CHECK VALVE
- CONTROL VALVE

PID FORMAT

XYZ / ABC — SUPERSCRIPT
X=MEASURED OR INITIATING VARIABLE
Y=READOUT OR FUNCTION
Z=MODIFIER
ABC=LOOP NUMBER
INSTRUMENT BUBBLE

ISA STANDARDS FOR P&ID

	1st LETTER (MEASURED OR INITIATING VARIABLE)	2nd LETTER (READOUT OR FUNCTION)	3rd LETTER (MODIFIER)
A	ANALYSIS	ALARM	
B	BURNER (BATTERY)		(BACK)
C	COMMUNICATION	CONTROL	CLOSED
D	DENSITY	(DELAY)	
E	VOLTAGE		
F	FLOW		FAIL (FLOW)
G	GAS		GREEN BULB
H	HAND	MANUAL	HIGH
I	CURRENT (INTRUSION)	INDICATE	
J	POWER (EQUIPMENT)		
K	TIME	CONTROL STATION	
L	LEVEL	LIGHT	LOW
M	MOTION		MIDDLE
N	USERS CHOICE		
O	USERS CHOICE		OPEN
P	PRESSURE	(PUMP)	(PRESSURE)
Q	QUANTITY (EVENT)	TOTALIZE	
R	RADIATION (REQ'D)	RECORD	RED BULB
S	SPEED (SMOKE)	SWITCH	SOLENOID
T	TEMPERATURE	TRANSMITTER	(TRANSMITTER)
U	MULTI VARIABLE	MULTI FUNCTION	
V	VISCOSITY (pH)	VALVE	
W	WEIGHT		
X	UNCLASSIFIED		
Y	USERS CHOICE	RELAY (TRANSDUCER)	
Z	POSITION		

ABBREVIATIONS

SPDT – SINGLE POLE, DOUBLE THROW
SPST – SINGLE POLE, SINGLE THROW
DPST – DOUBLE POLE, SINGLE THROW
WP – WEATHER–PROOF
GFI – GROUND FAULT INTERRUPT
P – POWER
C – CONTROL
J – INSTRUMENTATION
PC – POWER & CONTROL
CJ – CONTROL & INSTRUMENTATION
CKT. – CIRCUIT
C.O. – CONDUIT ONLY
N.L. – NIGHT LIGHT
AL. – ALUMINUM
CU. – COPPER

HOA	HAND–OFF–AUTO SWITCH
RTM	RUN TIME METER
OC	OPERATION COUNTER
MRL	MOTOR RUN INDICATION LIGHT
SFIL	SEAL FAIL INDICATION LIGHT
SFTR	SEAL FAIL TRIP RESET
OTIL	OVER TEMPERATURE INDICATION LIGHT
MOIL	MOTOR OVERLOAD INDICATION LIGHT

INDICATE TYPE BY LETTER

- V — A – AMMETER; AH – AMPERE–HOUR; PF – POWER FACTOR; V – VOLTMETER; VA – VOLT AMMETER
- AH — VAR – VARMETER; VARH – VARHOUR METER; W – WATTMETER; WH – WATTHOUR METER

INSTRUMENT METER

RACEWAY LEGEND

SITE PLAN LEGEND

- P — PROPOSED POWER
- TEL — PROPOSED TELEPHONE
- TELM — PROPOSED INSTRUMENTATION
- FO — PROPOSED FIBER OPTICS

BUILDING OR FACILITY PLAN LEGEND

- 480 VOLT EXPOSED RACEWAY
- 480 VOLT WIRING CONCEALED, UNDERGROUND, EMBEDDED, OR CONCRETE ENCASED RACEWAY
- 120/208/240 VOLT EXPOSED RACEWAY
- 120/208/240V WIRING CONCEALED, UNDERGROUND, EMBEDDED, OR CONCRETE ENCASED RACEWAY
- CONTROL OR INSTRUMENTATION EXPOSED RACEWAY
- CONTROL OR INSTRUMENTATION, UNDERGROUND, EMBEDDED, OR CONCRETE ENCASED RACEWAY
- HOME RUN TO PANELBOARD OR AS INDICATED
- CONDUIT RUN, BROKEN AND CONTINUED SAME SHEET OR AS NOTED
- FLEXIBLE CONDUIT
- CONDUIT RUN. HATCH MARKS INDICATE NUMBER OF CONDUCTORS
- ½" GRC, 2–#12 — CALLOUT INDICATING CONDUIT SIZE, NUMBER AND SIZE OF WIRE.
- XXX — CALLOUT INDICATING CONDUIT PER SCHEDULE
- CONDUIT BENT UP OR TOWARD
- CONDUIT BENT DOWN OR AWAY
- CAPPED CONDUIT

LADDER LOGIC SYMBOL LEGEND

INDICATOR LIGHT	INDICATOR LIGHT A – AMBER G – GREEN B – BLUE R – RED C – CLEAR W – WHITE
LIMIT SWITCH	LIMIT SWITCH, NORMALLY OPEN
LIMIT SWITCH	LIMIT SWITCH, NORMALLY CLOSED
TIME DELAY CONTACT	TIME DELAY CONTACT, NORMALLY OPEN, TIME TO CLOSE
TIME DELAY CONTACT	TIME DELAY CONTACT, NORMALLY CLOSED, TIME TO OPEN
TIME DELAY CONTACT	TIME DELAY CONTACT, NORMALLY OPEN, TIME TO OPEN
TIME DELAY CONTACT	TIME DELAY CONTACT, NORMALLY CLOSED, TIME TO CLOSE
RELAY CONTACT, NC RELAY CONTACT, NO	RELAY CONTACT, INSTANTANEOUS CHANGE
PRESSURE SWITCH	PRESSURE SWITCH, NORMALLY OPEN
PRESSURE SWITCH	PRESSURE SWITCH, NORMALLY CLOSED
LADDER LOGIC LINETYPES	
	COMPONENT INSTALLED INSIDE ENCLOSURE
	COMPONENT INSTALLED ON FRONT OF ENCLOSURE
	FIELD CONNECTED COMPONENT

RELAY XYZ 123	RELAY TR – TIMED RELAY CR – CONTROL RELAY
FLOAT SWITCH	FLOAT SWITCH, NORMALLY OPEN
FLOAT SWITCH	FLOAT SWITCH, NORMALLY CLOSED
PUSHBUTTON	PUSHBUTTON, NORMALLY CLOSED
PUSHBUTTON	PUSHBUTTON, NORMALLY OPEN
THERMOSTAT	THERMO SWITCH, NORMALLY OPEN
THERMOSTAT	THERMO SWITCH, NORMALLY CLOSED
FLOWSWITCH	FLOWSWITCH, NORMALLY OPEN
FLOWSWITCH	FLOWSWITCH, NORMALLY CLOSED
	2 POLE SWITCH
	3 POLE SWITCH

P&ID BUBBLE IDENTIFICATION CHART

EXISTING	FUNCTION
	INSTRUMENT IDENTIFICATION BUBBLE
	FIELD MOUNTED DEVICE OR INSTRUMENT
	FRONT PANEL MOUNTED INSTRUMENT OR DEVICE (LOCAL PANEL)
	BACK PANEL MOUNTED INSTRUMENT OR DEVICE (LOCAL PANEL)
	FRONT PANEL MOUNTED INSTRUMENT OR DEVICE (LAB ROOM PANEL)
	OPERATOR INTERFACE DISPLAY (LOCAL PANEL)
	OPERATOR INTERFACE DISPLAY (LAB ROOM PANEL)

GENERAL NOTES

1. THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS PAGE WILL APPEAR IN THIS SET OF PLANS.

2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY; EXACT LOCATIONS OF ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE INSTALLATION OF ALL EQUIPMENT SHOWN ON THESE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF ALL APPLICABLE CODES AND UTILITY COMPANY STANDARDS. CONTACT THE UTILITY COMPANY REPRESENTATIVES AND VERIFY THEIR REQUIREMENTS.

3. NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS IN EQUIPMENT LOCATIONS ARE DISCOVERED OR IF PROBLEMS ARISE DUE TO FIELD CONDITIONS, LACK OF INFORMATION OR ANY OTHER REASON. NO PAYMENT WILL BE MADE FOR CHANGES WHICH HAVE NOT BEEN REVIEWED BY THE ENGINEER.

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SIGNED: 03/27/19

CHRISTOPHER MICHAEL TORGERSEN — STATE OF WASHINGTON — 45317 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

ELECTRICAL LEGEND

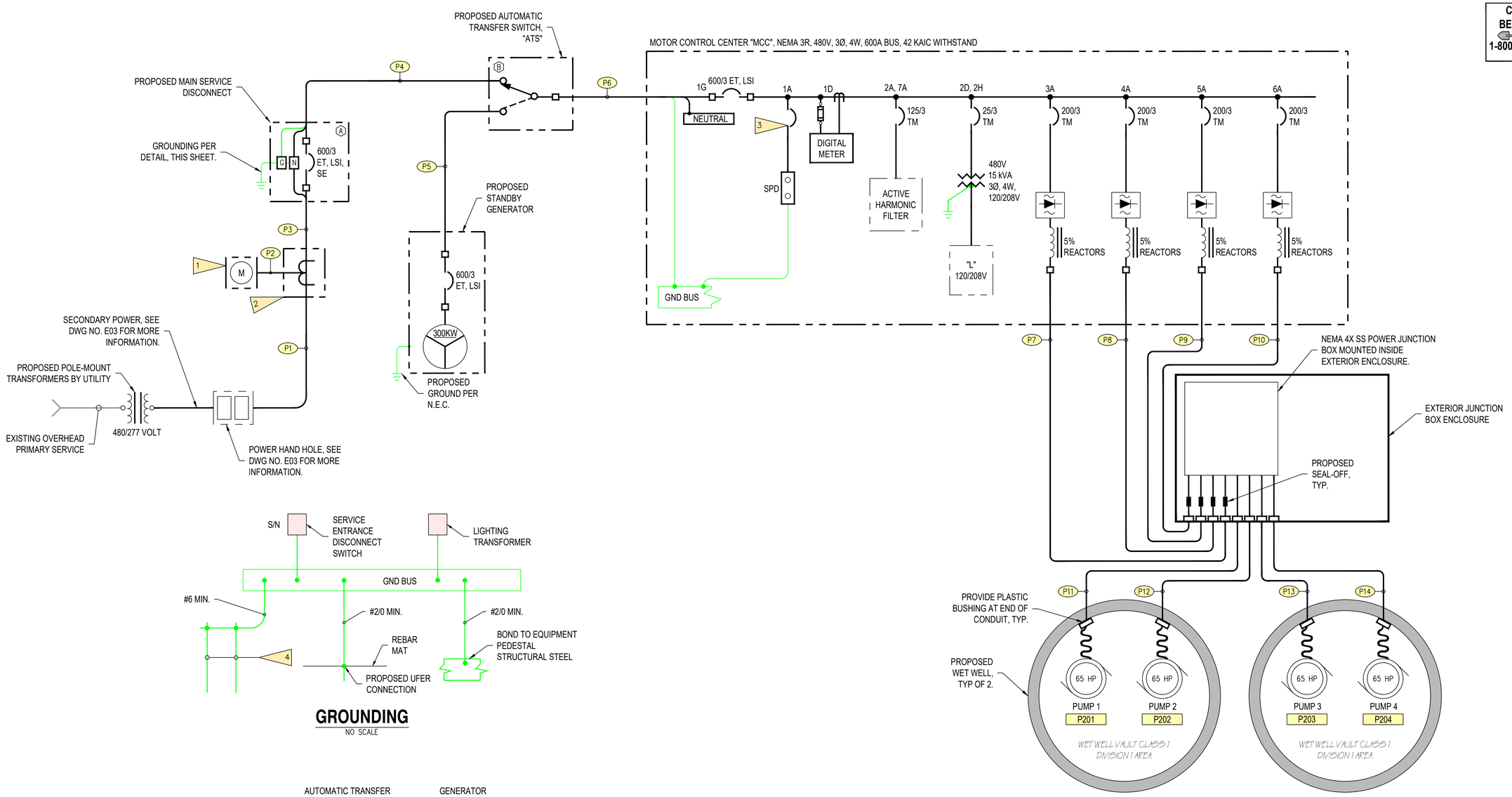
JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-ELEG01.DWG
DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

REVISIONS

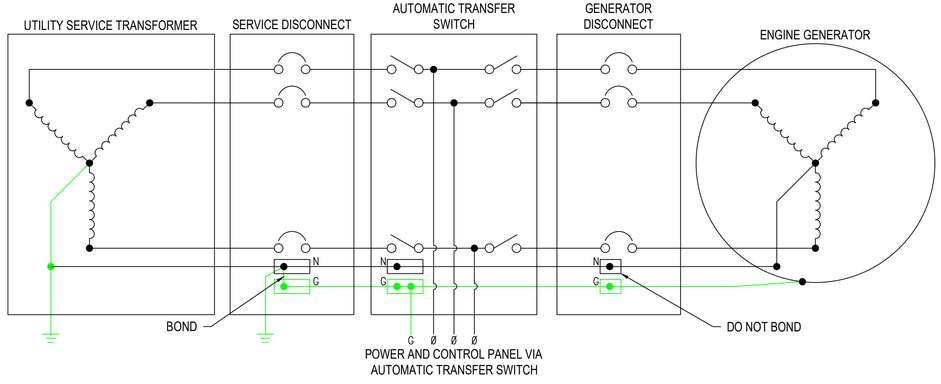
NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E01
SHEET NO.: 28 / 48



GROUNDING
NO SCALE



GENERATOR & TRANSFER SWITCH CONNECTION DIAGRAM
NO SCALE

ONE-LINE DIAGRAM
NOT TO SCALE

LOAD CALCULATIONS	
PUMP 1 (65 HP)	81.0A X 1.25 = 101.3 AMPS
PUMP 2 (65 HP)	81.0A X 1.00 = 81.0 AMPS
PUMP 3 (65 HP)	81.0A X 1.00 = 81.0 AMPS
PUMP 4 (65 HP)	81.0A X 1.00 = 81.0 AMPS
LIGHTING TRANSFORMER (15 kVA)	18.1A X 1.00 = 18.1 AMPS
TOTAL	362.4 AMPS

ELECTRICAL NOTES

1. PROPOSED UTILITY METERING. METER BASE AND ENCLOSURE BY CONTRACTOR PER SERVING UTILITY REQUIREMENTS. METER BY SNOHOMISH COUNTY PUD.
2. PROPOSED NEMA 3R CURRENT TRANSFORMER ENCLOSURE PER UTILITY REQUIREMENTS.
3. PROPOSED FUSING OR CIRCUIT BREAKER PER SURGE PROTECTION DEVICE MANUFACTURER'S RECOMMENDATION.
4. GROUND ROD PER N.E.C. (TYPICAL). SEE DWG NO. E11 FOR DETAIL.
5. SEE DWG NO. E12 FOR CONDUIT AND CONDUCTOR SCHEDULE.
6. SEE DWG NO. E12 FOR ELECTRICAL EQUIPMENT SCHEDULE.

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

ONE-LINE DIAGRAM

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8.0-ELEC02.DWG
DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	CMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E02
SHEET NO.: 29
48

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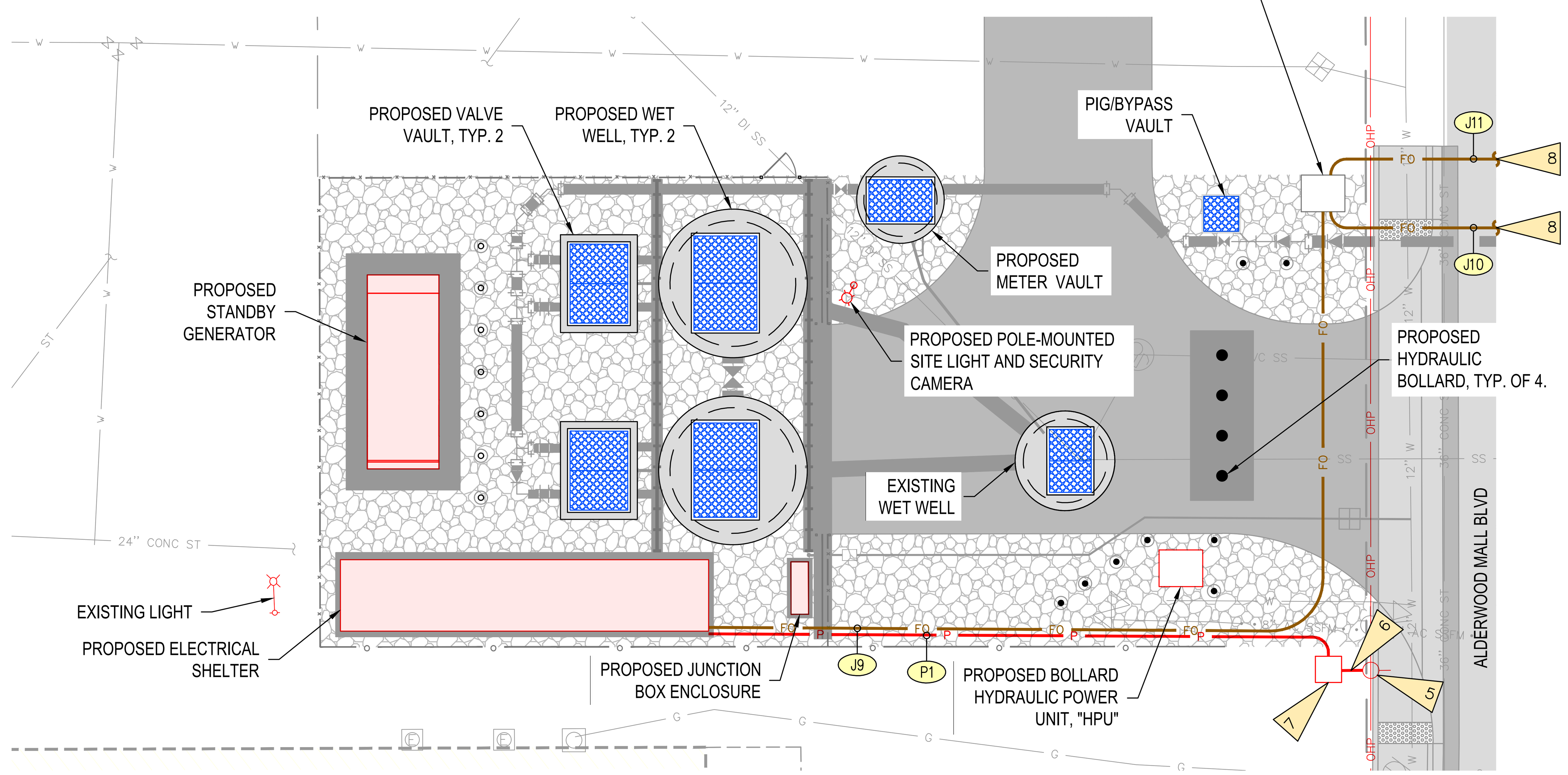
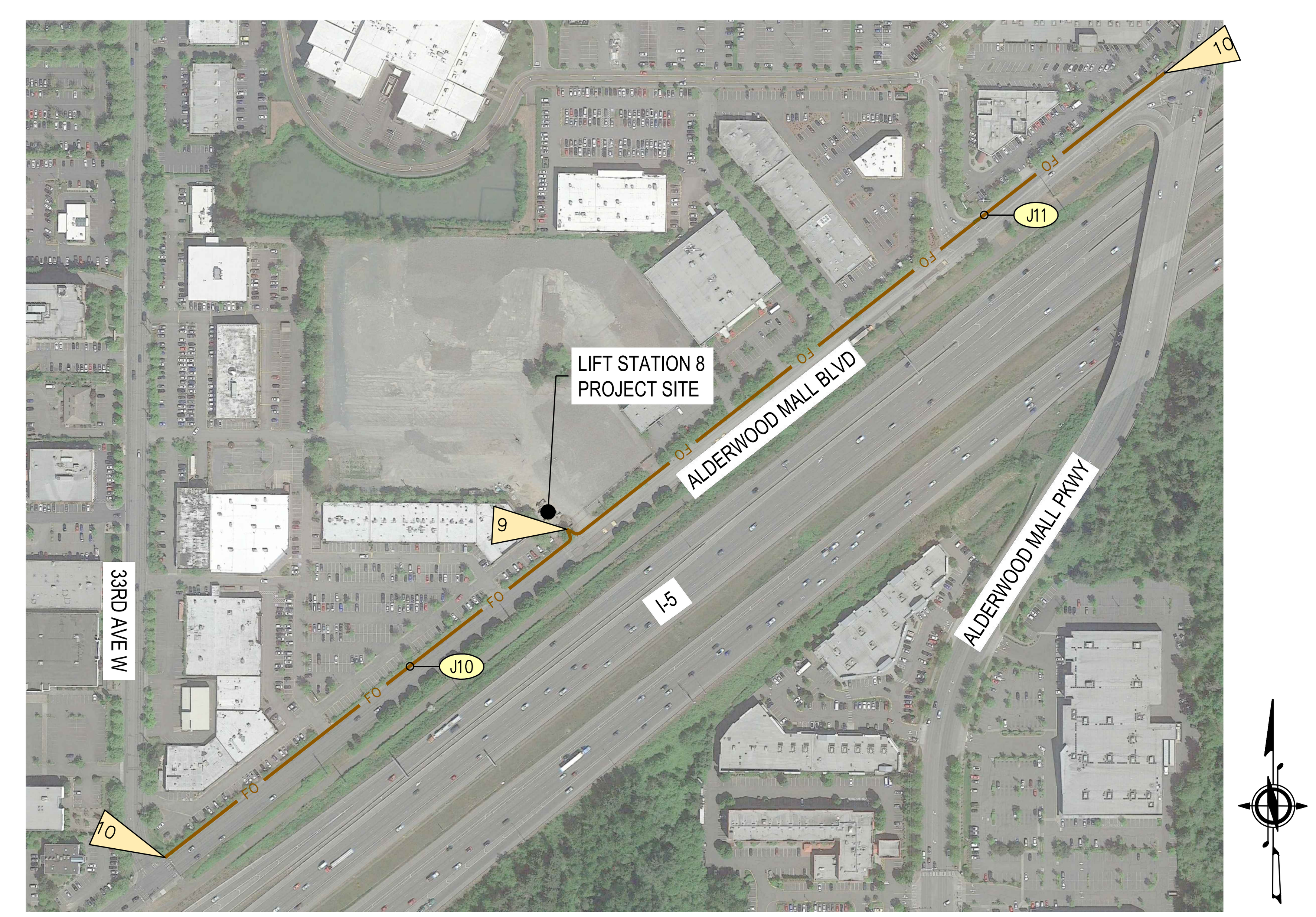


ELECTRICAL SITE PLAN

1" = 10'

ELECTRICAL NOTES	
XX	1. SEE DWG NO. E12 FOR CONDUIT AND CONDUCTOR SCHEDULE.
X	2. SEE DWG NO. E12 FOR ELECTRICAL EQUIPMENT SCHEDULE.
	3. SEE DWG NO. E04 FOR UNDERGROUND CONDUITS BETWEEN ELECTRICAL SHELTER, GENERATOR, WET WELLS, AND VAULTS.
	4. CONTRACTOR SHALL COORDINATE SECONDARY POWER REQUIREMENTS WITH SNOHOMISH COUNTY PUD. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NOT PERFORMED BY PUD.
5	5. PROPOSED POLE MOUNTED TRANSFORMERS BY SNOHOMISH COUNTY PUD INSTALLED ON EXISTING POLE.
6	6. PROPOSED UNDERGROUND SECONDARY POWER SERVICE TO POWER HAND HOLE. CONTRACTOR SHALL PROVIDE AND INSTALL 6" PVC CONDUIT FROM POWER HAND HOLE TO EXISTING UTILITY POLE, USING A 60" RADIUS STEEL ELBOW TO TERMINATE THE CONDUIT AT LEAST 6" FROM THE POLE. SNOHOMISH COUNTY PUD SHALL PROVIDE AND INSTALL SECONDARY SERVICE CONDUCTORS TO POWER HAND HOLE.
7	7. PROPOSED POWER HAND HOLE. CONTRACTOR SHALL PROVIDE EXCAVATION AND RESTORATION FOR POWER HAND HOLE. CONTRACTOR SHALL PROVIDE AND INSTALL POWER HAND HOLE PER SNOHOMISH COUNTY PUD REQUIREMENTS.
8	8. SEE FIBER OPTIC CONNECTION PLAN FOR CONTINUATION, THIS SHEET.
9	9. SEE ELECTRICAL SITE PLAN FOR CONTINUATION, THIS SHEET.
10	10. SEE APPENDIX FOR FIBER OPTIC CONNECTION LOCATION. CONTRACTOR SHALL CONNECT PROPOSED FIBER OPTIC CABLE TO EXISTING CITY FIBER OPTIC NETWORK AT EACH LOCATION.



FIBER OPTIC CONNECTION PLAN

1" = 250'

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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
ELECTRICAL SITE PLAN

LYNNWOOD WASHINGTON

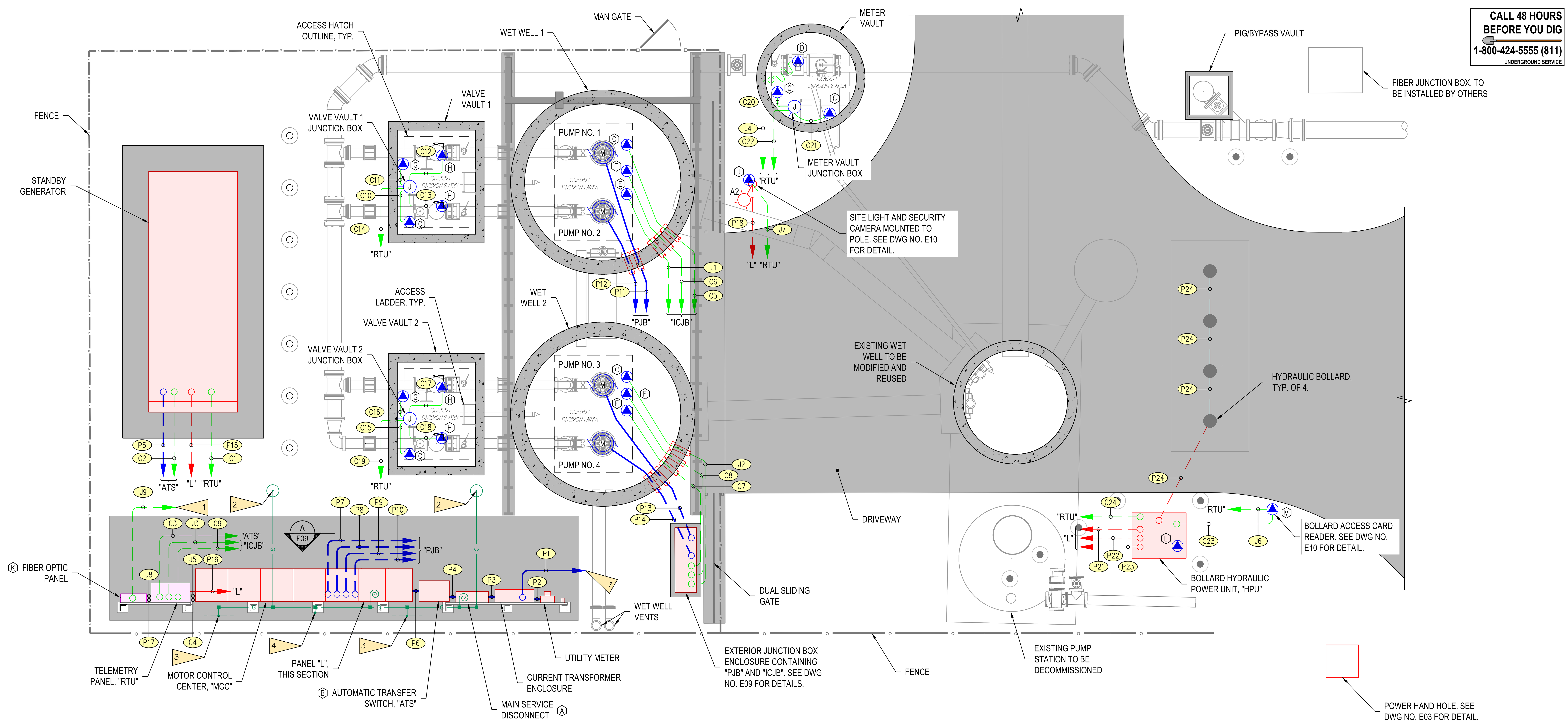
ENGINEER: KMS | SAVE DATE: Mar 25, 2019 | CLIENT: LYNN | JOB NO.: 117-098
REVIEWED: CMR | PLOT DATE: Mar 26, 2019 | FILENAME: LS8-D-ELEC03.DWG

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
0	03/27/19	ISSUED FOR BIDDING	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E03
SHEET NO.: 30 / 48



ELECTRICAL NOTES	
1	1. SEE ELECTRICAL SITE PLAN DWG NO. E03 FOR CONTINUATION.
2	2. GROUND ROD PER N.E.C. (TYPICAL). USE EXOTHERMIC WELD CONNECTION AT THE GROUND ROD. SEE DWG NO. E11 FOR DETAIL. LOCATE GROUND RODS 2' MINIMUM FROM CONCRETE PAD.
3	3. CONNECTION TO REINFORCEMENT GRID (TYPICAL OF 2 LOCATIONS). SEE DWG NO. E11 FOR ADDITIONAL DETAIL.
4	4. CONNECTION TO SHELTER STRUCTURAL STEEL.
5	5. NOT ALL ELECTRICAL SHELTER CONDUITS SHOWN. SEE ELECTRICAL SHELTER DETAILS DWG NO. E05 FOR ADDITIONAL CONDUITS.
XX	6. SEE DWG NO. E12 FOR CONDUIT AND CONDUCTOR SCHEDULE.
X	7. SEE DWG NO. E12 FOR ELECTRICAL EQUIPMENT SCHEDULE.
A#	8. SEE DWG NO. E12 FOR LIGHTING SCHEDULE.

SHELTER ROOF AND LIGHTING NOT SHOWN THIS VIEW FOR CLARITY. SEE ELECTRICAL SHELTER DETAILS DWG NO. E05 FOR MORE INFORMATION.

POWER DISTRIBUTION AND SIGNAL PLAN

¼" = 1'-0"

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

POWER DISTRIBUTION & SIGNAL PLAN

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-ELEC04.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
	03/27/19	ISSUED FOR BIDDING	CMP	RJF

SCALE: SHOWN
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E04
SHEET NO.: 31 / 48

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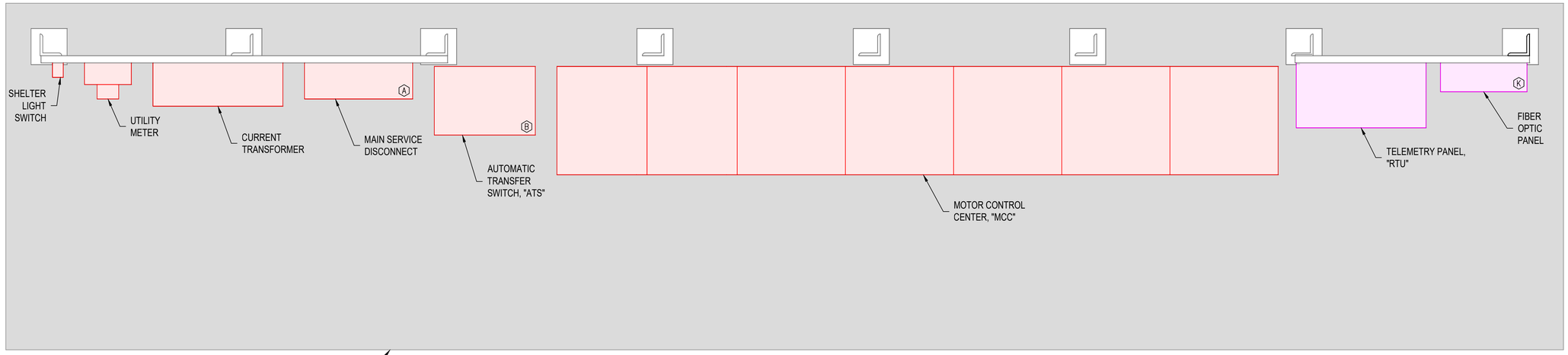
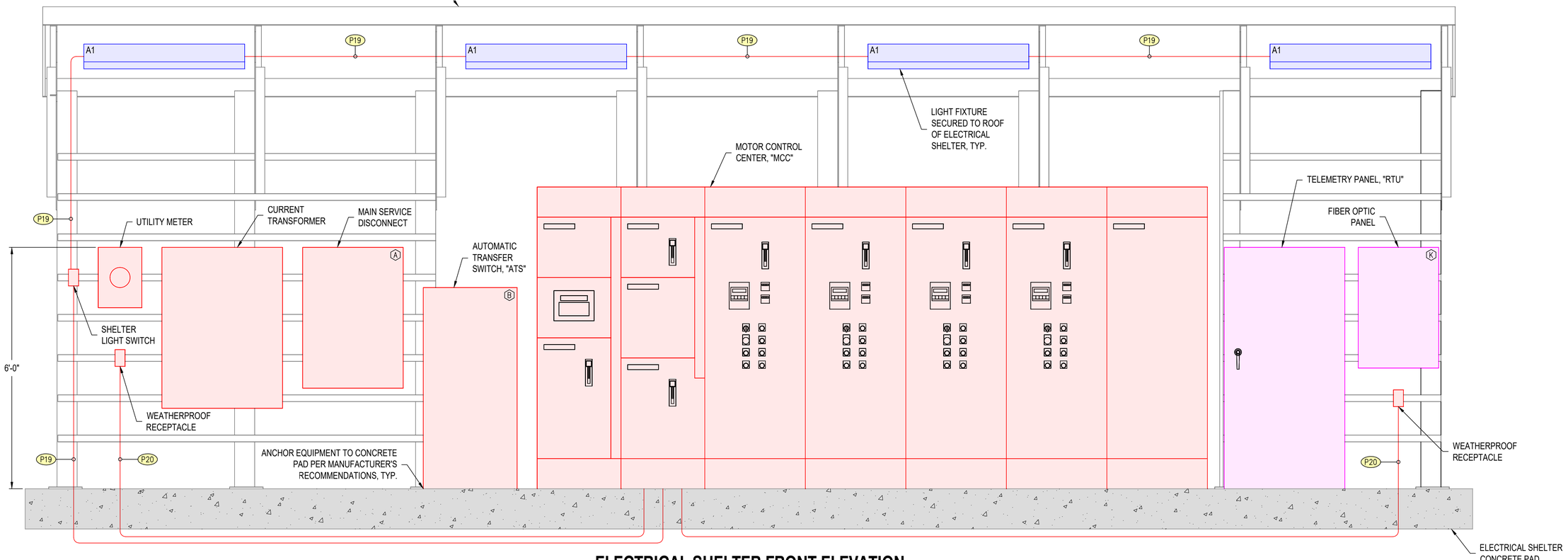


SHELTER ROOF, ROOF SUPPORTS, AND LIGHTING NOT SHOWN THIS VIEW FOR CLARITY

ELECTRICAL SHELTER PLAN
¾" = 1'–0"

ELECTRICAL NOTES	
XX	1. SEE DWG NO. E12 FOR CONDUIT AND CONDUCTOR SCHEDULE.
X	2. SEE DWG NO. E12 FOR ELECTRICAL EQUIPMENT SCHEDULE.
A#	3. SEE DWG NO. E12 FOR LIGHTING SCHEDULE.



ELECTRICAL SHELTER FRONT ELEVATION
¾" = 1'–0"

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CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS
LYNNWOOD WASHINGTON

ELECTRICAL SHELTER DETAILS

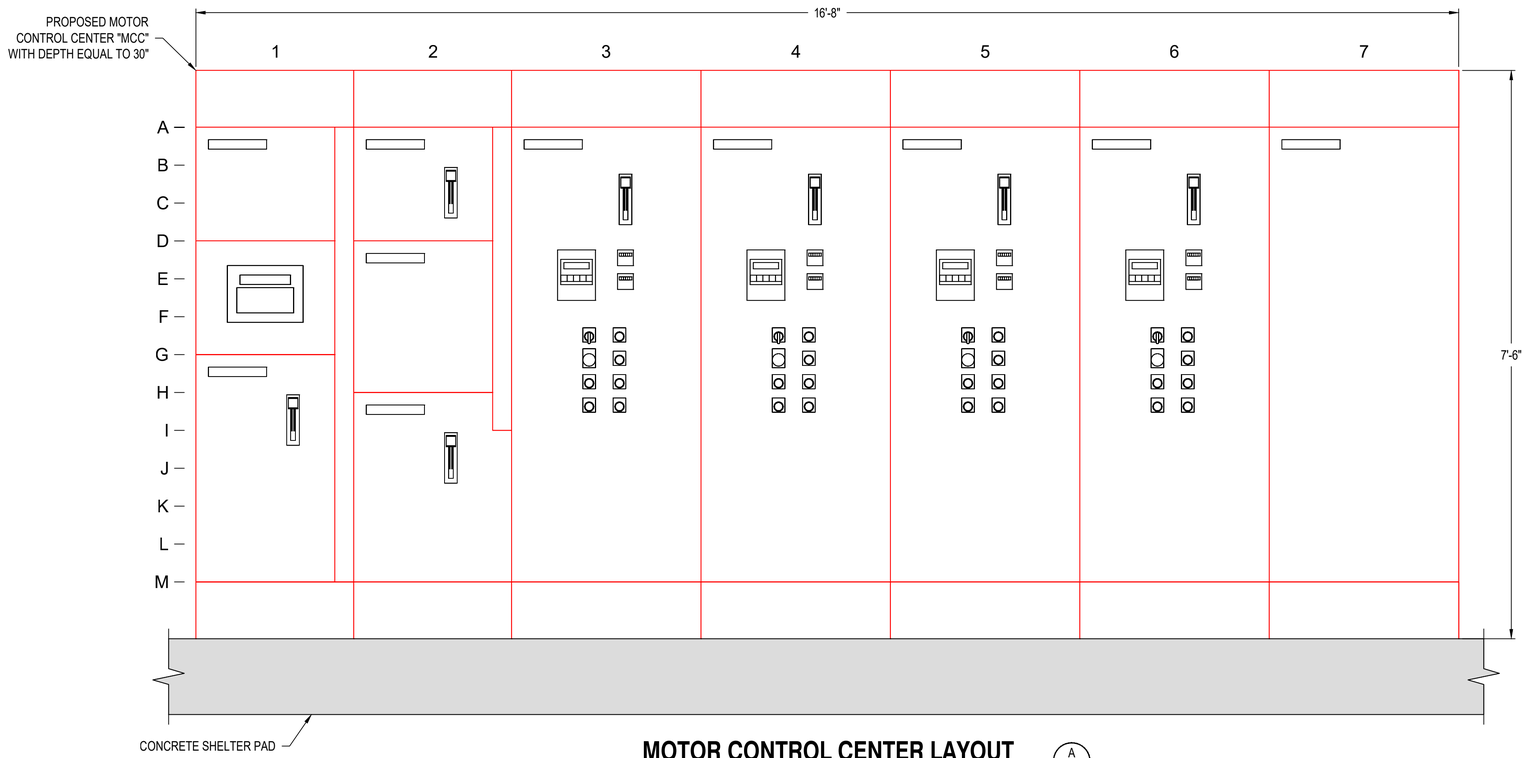
JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-ELEC05.DWG
ENGINEER: KAS
REVIEWED: CMR
SAVE DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	CMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

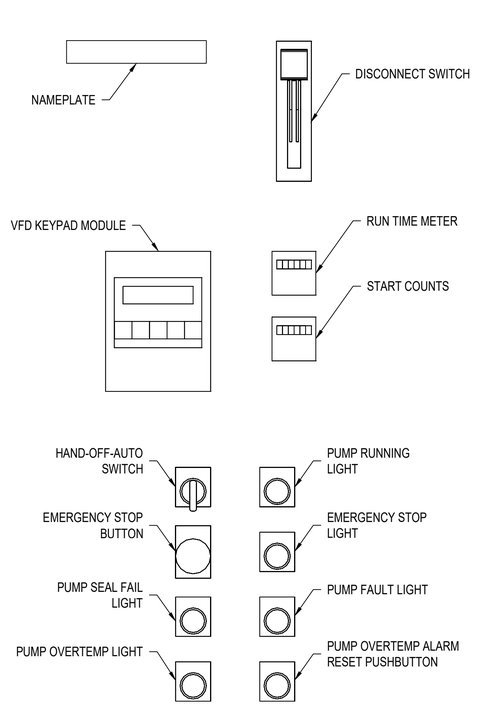
DWG NO.: E05
SHEET NO.: 32 48



MOTOR CONTROL CENTER LAYOUT

1"=1'-0"

A / E04



TYPICAL VFD PANEL LAYOUT

NOT TO SCALE

MCC CONTROL DEVICES	
MCC SECTION	NAMEPLATE SCHEDULE
1A	SURGE PROTECTION DEVICE (SPD)
1D	POWER MONITOR
1G	MCC MAIN DISCONNECT
2A	ACTIVE HARMONIC FILTER FEEDER
2D	PANEL "L"
2H	LIGHTING TRANSFORMER AND DISCONNECT
3A	PUMP 1 ELAPSED TIME (HOURS) START COUNTS EMERGENCY STOP PUMP RUNNING PUMP FAULT PUMP HAND-OFF-AUTO PUMP OVERTEMP ALARM PUMP SEAL FAIL ALARM EMERGENCY STOP PUMP OVERTEMP ALARM RESET
4A	PUMP 2 ELAPSED TIME (HOURS) START COUNTS EMERGENCY STOP PUMP RUNNING PUMP FAULT PUMP HAND-OFF-AUTO PUMP OVERTEMP ALARM PUMP SEAL FAIL ALARM EMERGENCY STOP PUMP OVERTEMP ALARM RESET
5A	PUMP 3 ELAPSED TIME (HOURS) START COUNTS EMERGENCY STOP PUMP RUNNING PUMP FAULT PUMP HAND-OFF-AUTO PUMP OVERTEMP ALARM PUMP SEAL FAIL ALARM EMERGENCY STOP PUMP OVERTEMP ALARM RESET
6A	PUMP 4 ELAPSED TIME (HOURS) START COUNTS EMERGENCY STOP PUMP RUNNING PUMP FAULT PUMP HAND-OFF-AUTO PUMP OVERTEMP ALARM PUMP SEAL FAIL ALARM EMERGENCY STOP PUMP OVERTEMP ALARM RESET
7A	ACTIVE HARMONIC FILTER

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

MOTOR CONTROL CENTER DETAILS

ENGINEER: KMS
REVIEWED: CMR
SAVE DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-ELEC06.DWG
JOB NO.: 117-038

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E06
SHEET NO.: 33
48

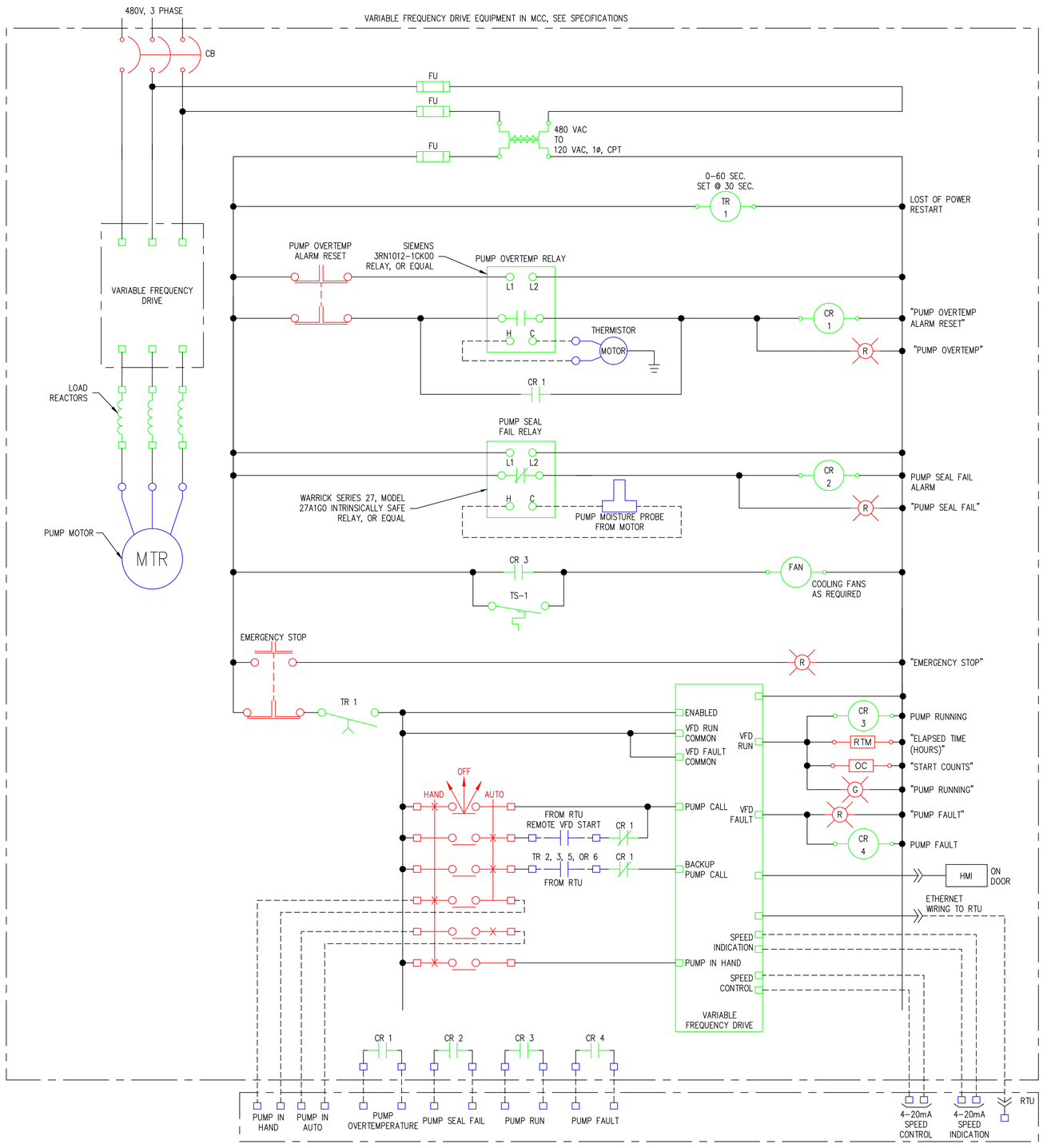

DIAGRAM 1: PUMP, TYP.

NO SCALE

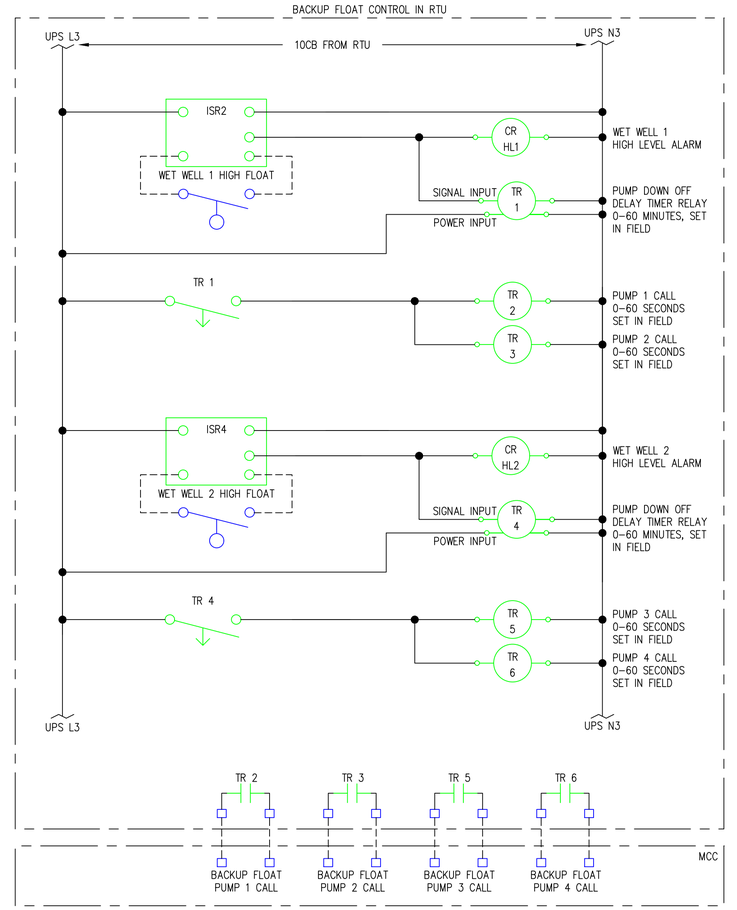

DIAGRAM 2: BACKUP FLOAT CONTROL LOGIC

NO SCALE

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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS

CONTROL LOGIC DIAGRAMS

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-ELEC07.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

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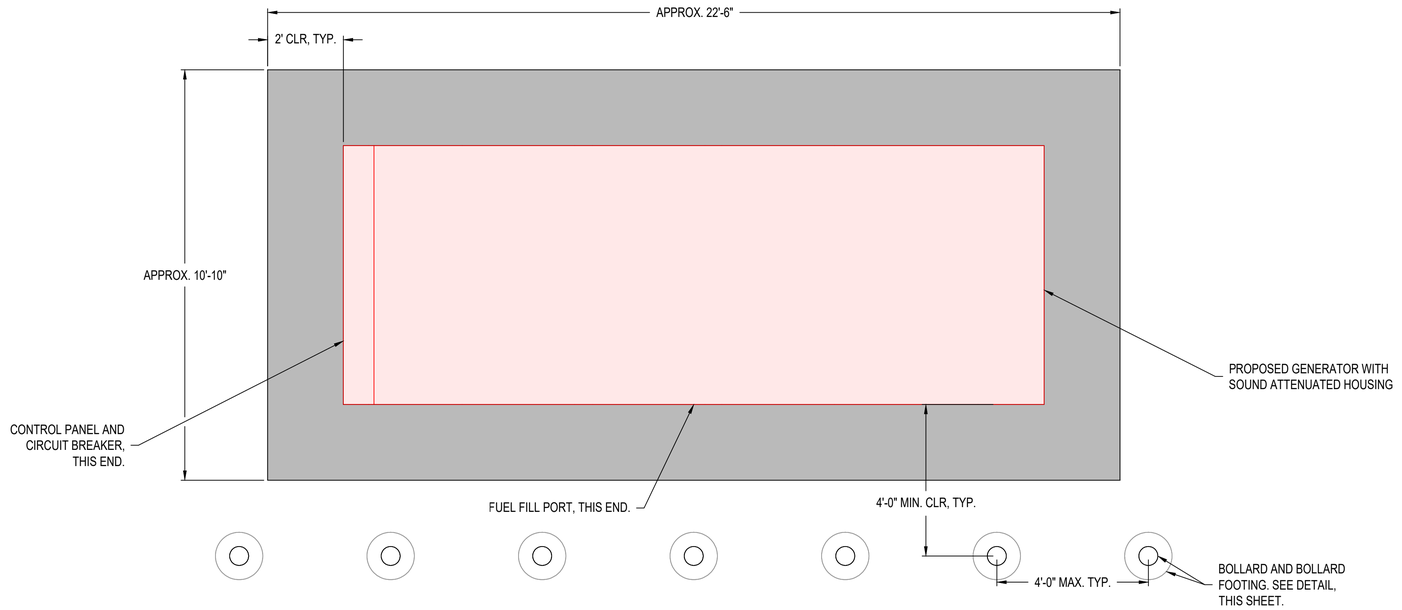
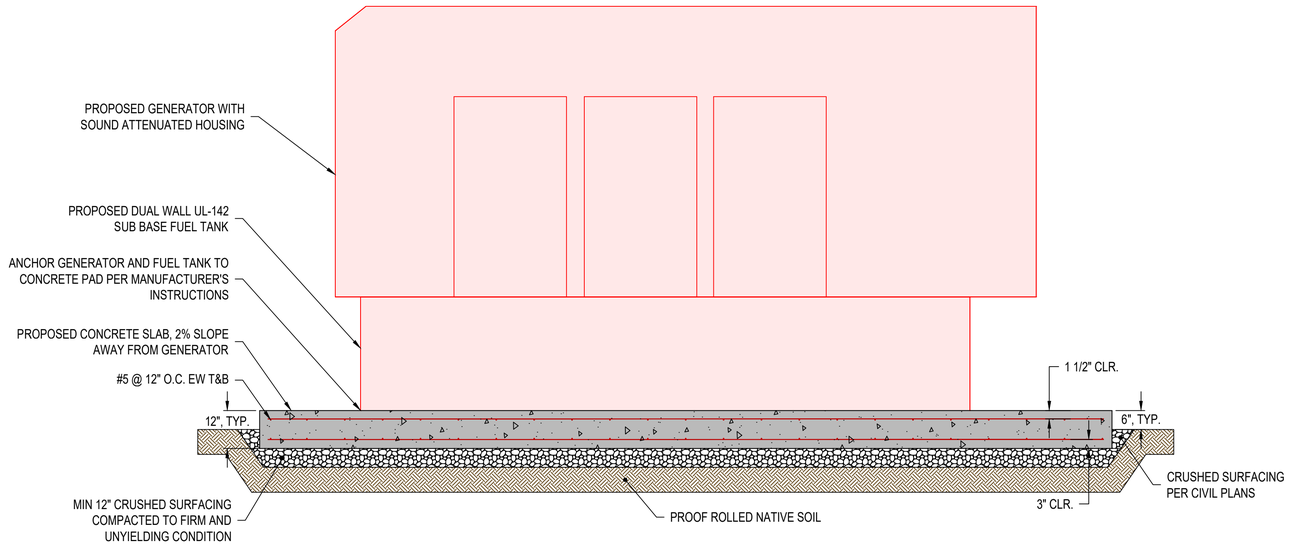
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E07
SHEET NO.: 34 / 48



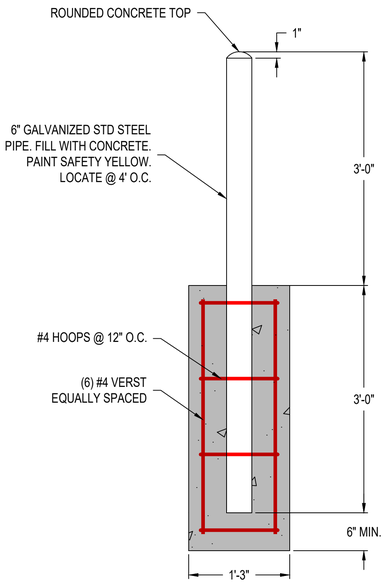
GENERATOR AND FUEL TANK PLAN VIEW

½" = 1'-0"



GENERATOR AND FUEL TANK SIDE ELEVATION VIEW

½" = 1'-0"



BOLLARD DETAIL

NOT TO SCALE

400
E08

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45317
REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

LYNNWOOD WASHINGTON

GENERATOR DETAILS

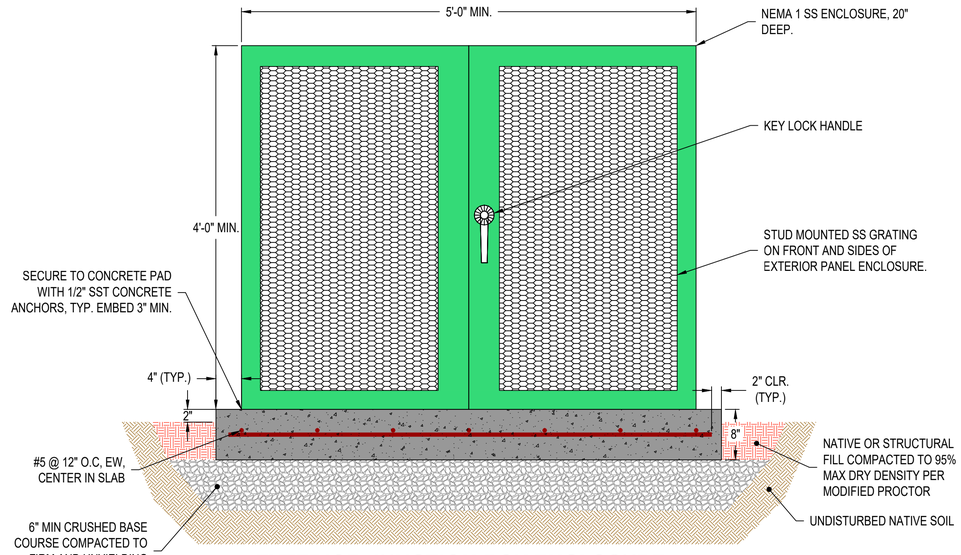
NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	OMP	RJF

REVISIONS

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-ELEC08.DWG
SAVE DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

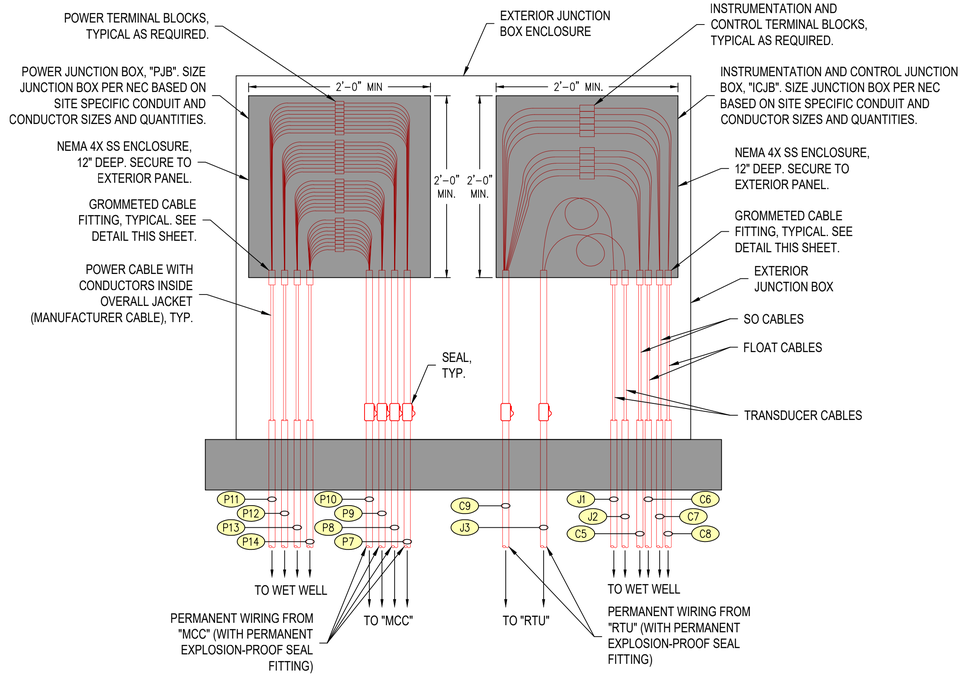
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E08
SHEET NO.: 35
48



EXTERIOR JUNCTION BOX ENCLOSURE ELEVATION DETAIL

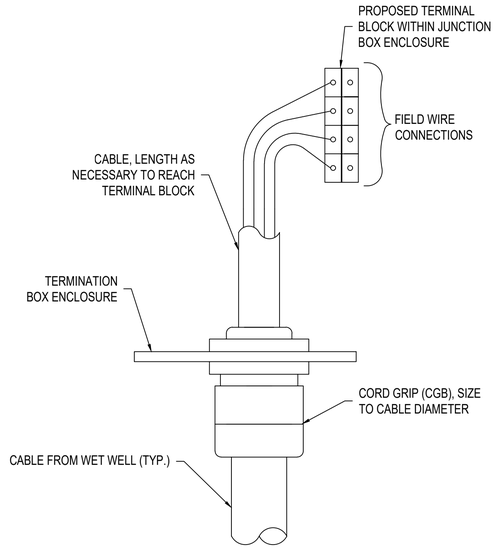
1" = 1'-0"



INTERIOR JUNCTION BOX ENCLOSURE ELEVATION DETAIL

NOT TO SCALE

ELECTRICAL NOTES	
XX	1. SEE DWG NO. E12 FOR CONDUIT AND CONDUCTOR SCHEDULE.



CABLE TRANSITION DETAIL (TYPICAL)

NOT TO SCALE

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SIGNED: 03/27/19

CHRISTOPHER MICHAEL ROGERS — STATE OF WASHINGTON — 45317 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

EXTERIOR JUNCTION BOX DETAILS

ENGINEER: KMS
REVIEWED: CMR
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-ELEC09.DWG
JOB NO.: 117-098

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E09
SHEET NO.: 36
48

CALL 48 HOURS BEFORE YOU DIG
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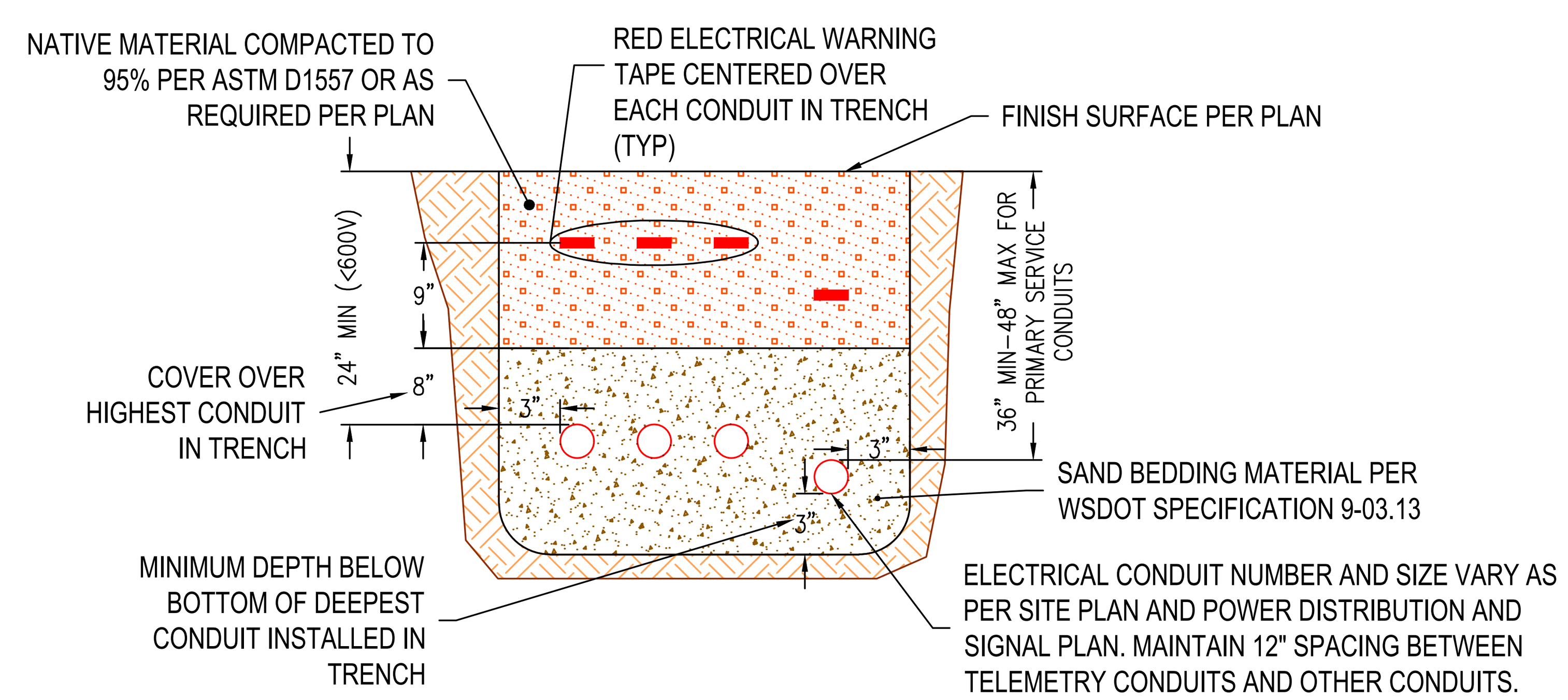
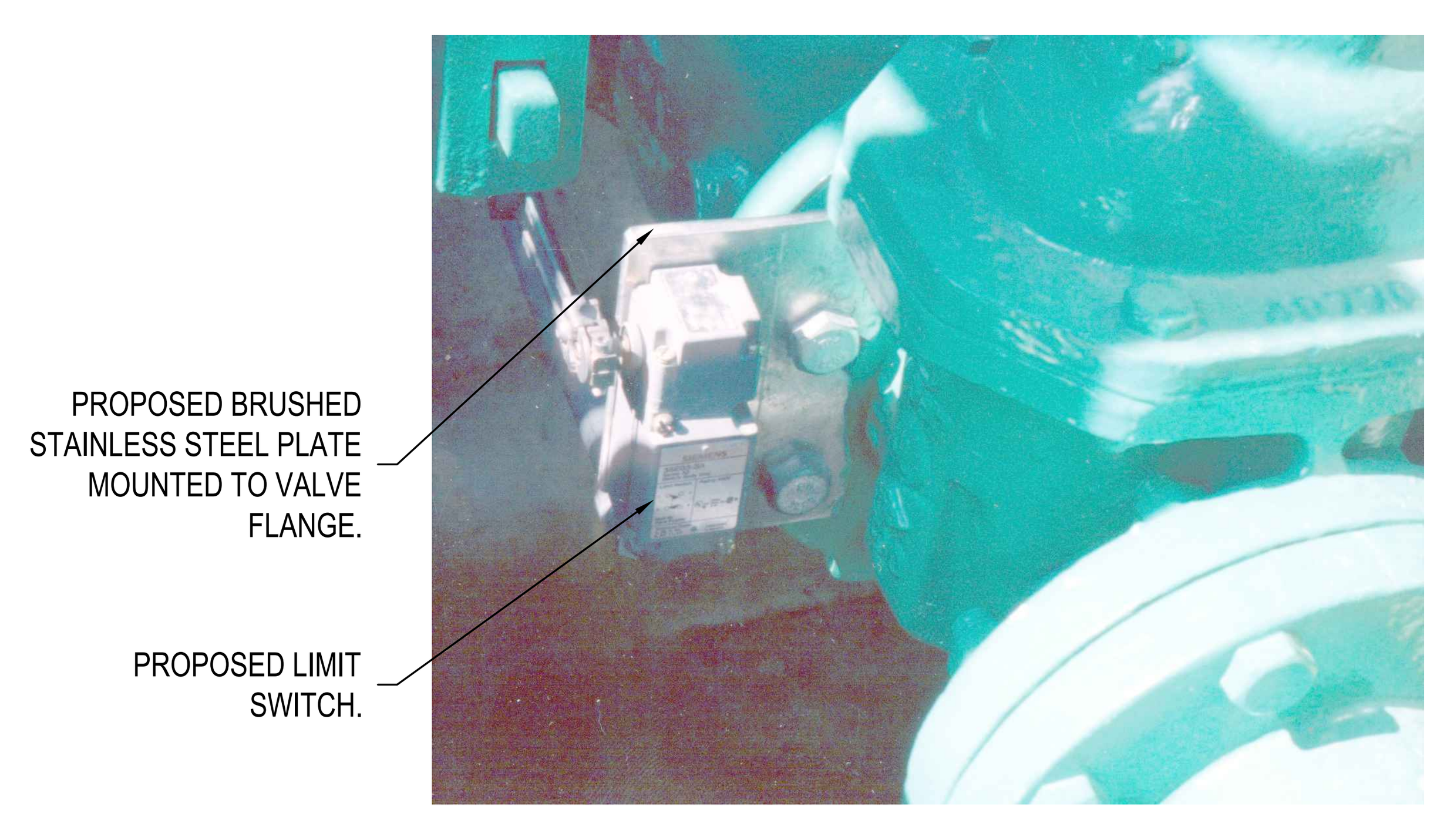
UNDERGROUND SERVICE



TYPICAL ELECTRICAL TRENCH DETAIL

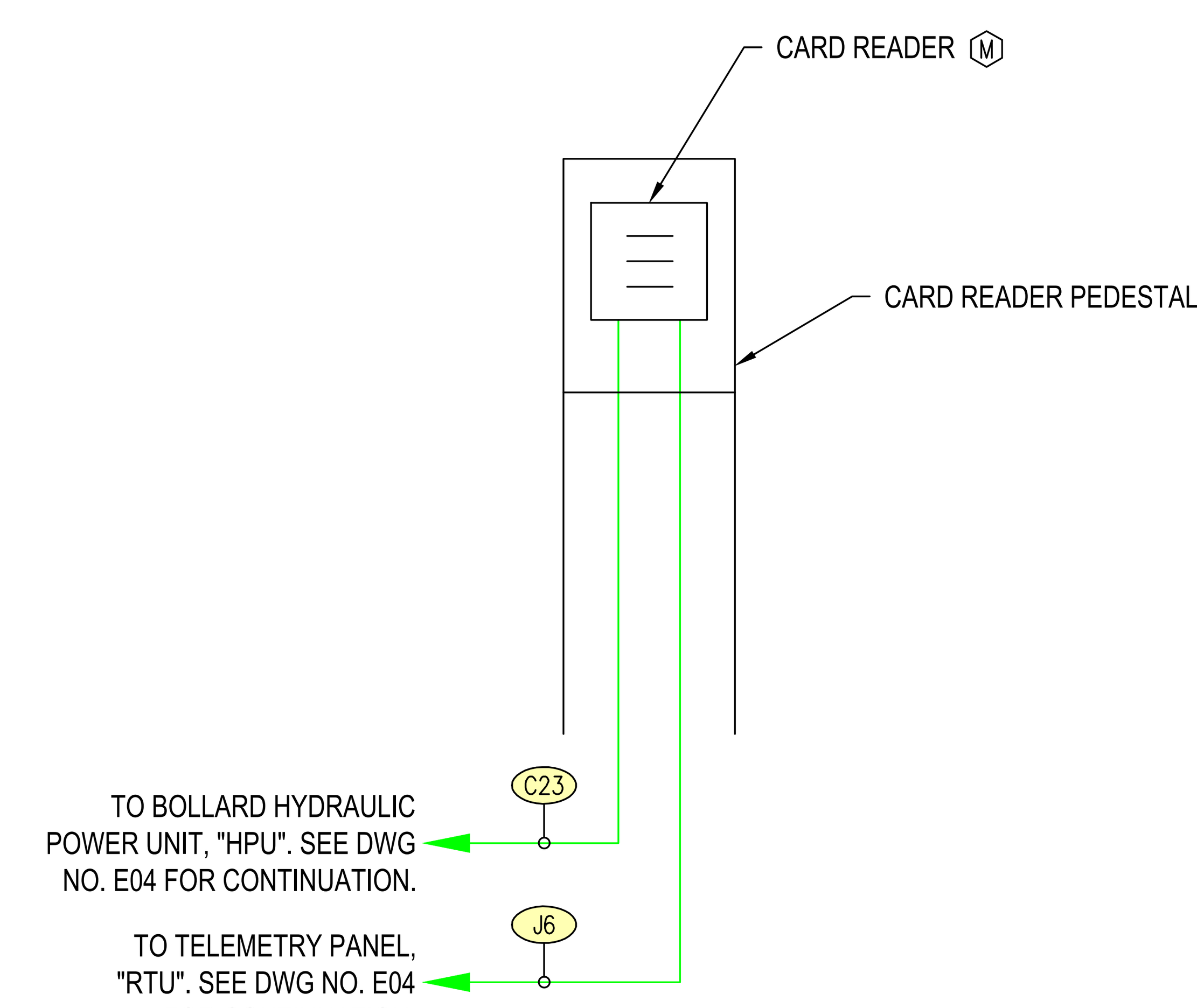
NOT TO SCALE

NOTE: BURY DEPTH OF CONDUIT AND HORIZONTAL SPACING SHALL BE CONFIRMED WITH SERVING UTILITY BEFORE CONSTRUCTION.



PROPOSED CHECK VALVE LIMIT SWITCH DETAIL

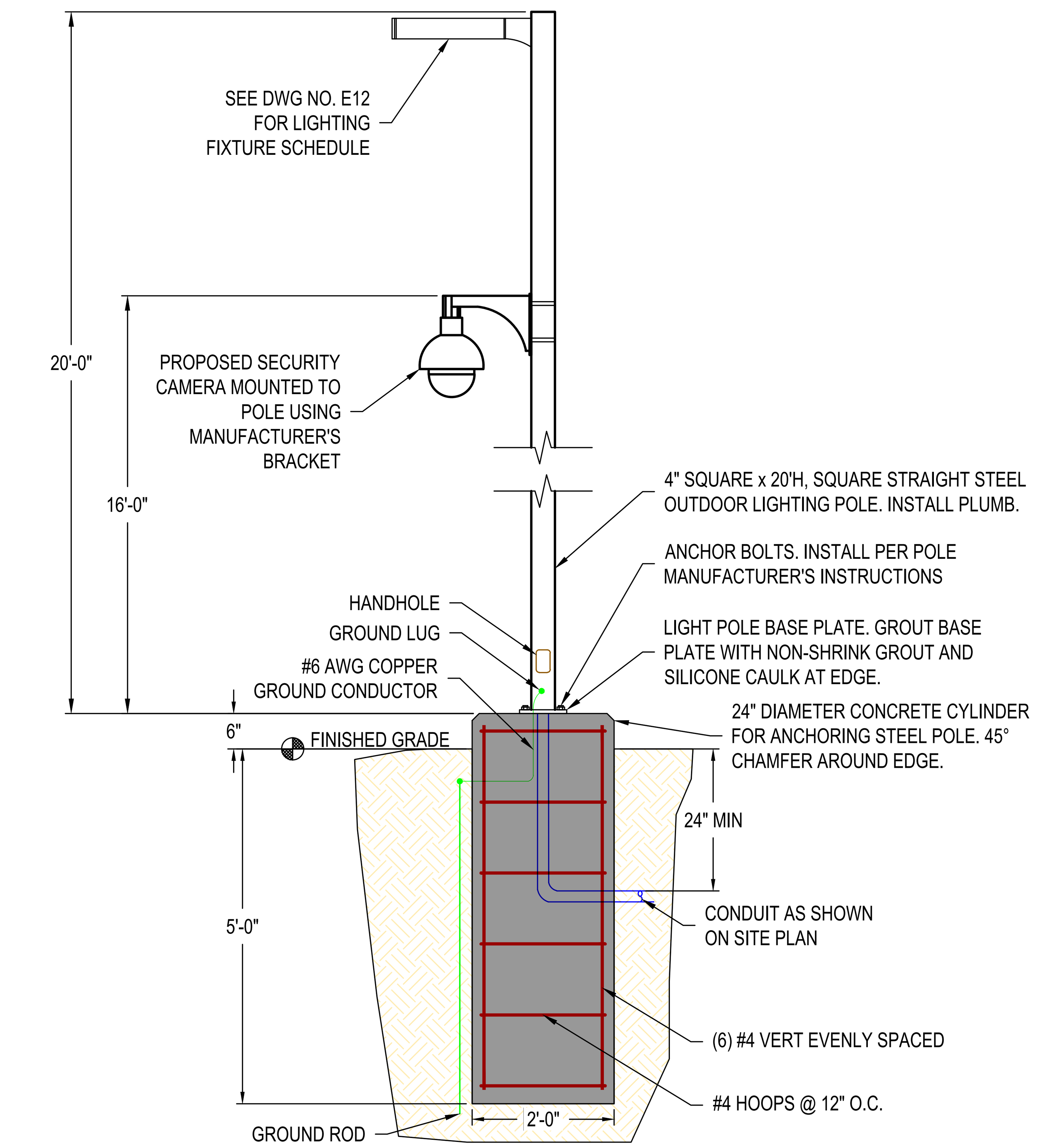
NOT TO SCALE



CARD READER DETAIL

NO SCALE

ELECTRICAL NOTES	
(XXX)	1. SEE DWG NO. E12 FOR CONDUIT AND CONDUCTOR SCHEDULE.



OUTDOOR SITE LIGHT AND SECURITY CAMERA DETAIL

NOT TO SCALE

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SIGNED: 03/27/19

CHRISTOPHER MICHAEL ROBERTS, STATE OF WASHINGTON, 45317, REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

ELECTRICAL DETAILS I

LYNNWOOD WASHINGTON

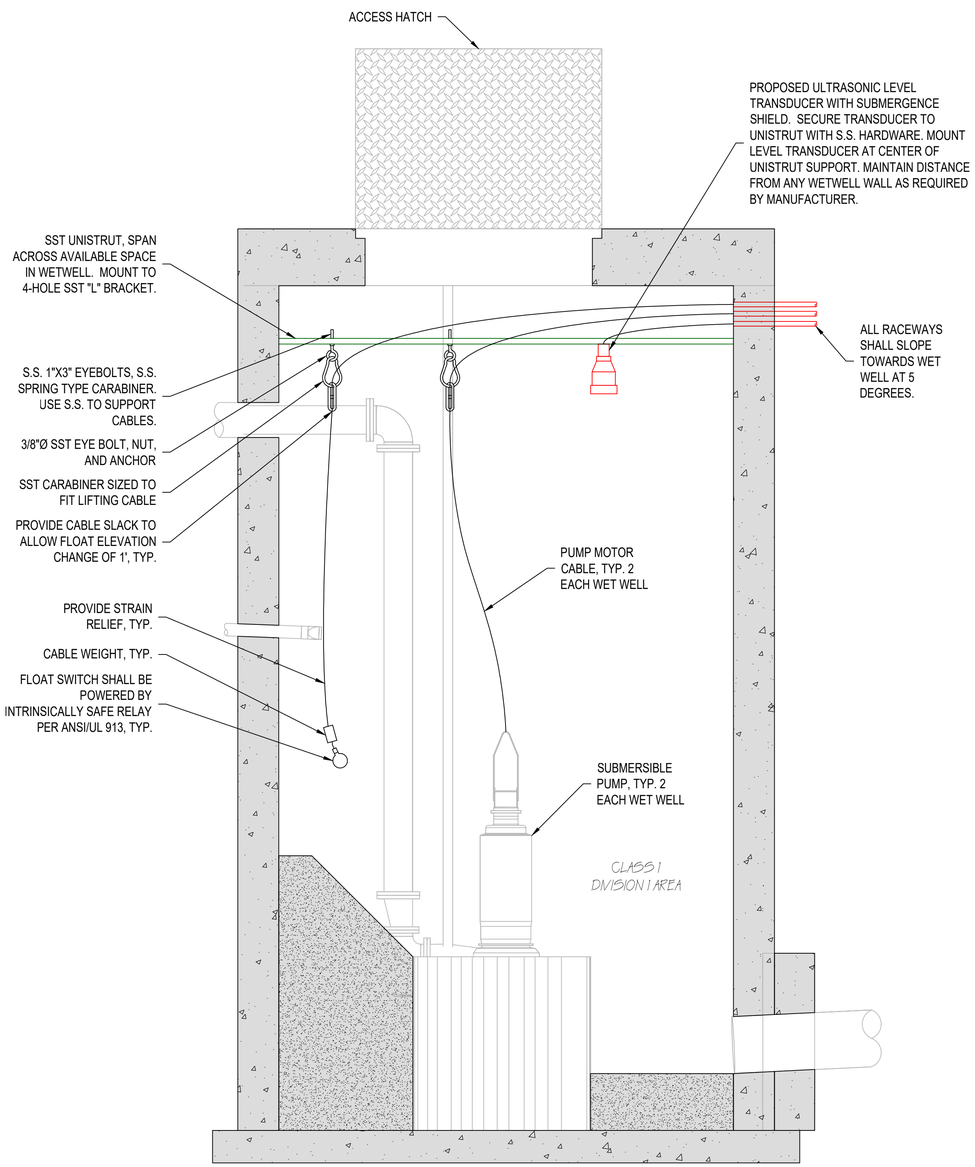
JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-ELEC09.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
△	03/27/19	ISSUED FOR BIDDING	CMP	RJF

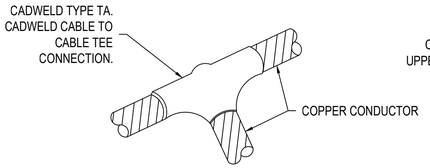
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E10
SHEET NO.: 37 / 48



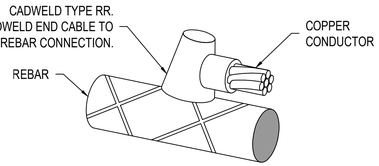
WET WELL TRANSDUCER AND FLOAT SWITCH DETAIL

NOT TO SCALE



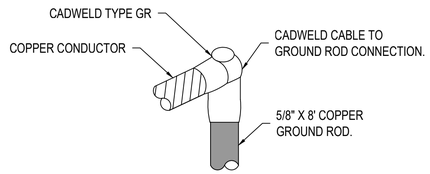
GROUND TEE DETAIL

NOT TO SCALE



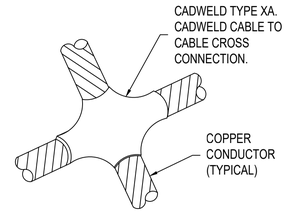
GROUND REBAR DETAIL

NOT TO SCALE



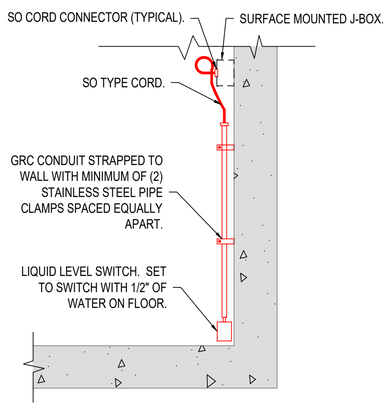
GROUND TEE DETAIL

NOT TO SCALE



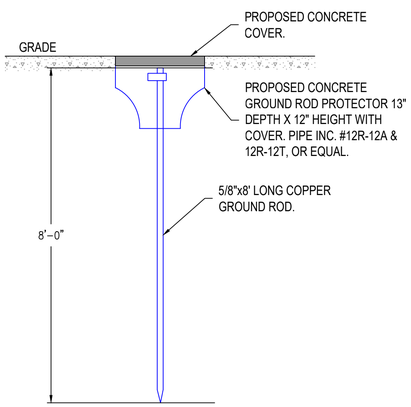
GROUND CROSS DETAIL

NOT TO SCALE



FLOOD SWITCH DETAIL

NOT TO SCALE



GROUND ROD DETAIL

NOT TO SCALE

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

ELECTRICAL DETAILS II

ENGINEER: KMS	CLIENT: LYNN
REVIEWED: CMR	FILENAME: LS8-D-ELEC09.DWG
PLOT DATE: Mar 26, 2019	JOB NO.: 117-098
SAVE DATE: Mar 26, 2019	

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E11
SHEET NO.: 38 / 48

POWER CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
P1	POWER HANDHOLE	CURRENT TRANSFORMER	(2) – 3"	(3) – #350 MCM, (1) – #350 MCM N	PARALLEL CONDUCTORS
P2	CURRENT TRANSFORMER	UTILITY METER	1 1/4"	(13) – #14	
P3	CURRENT TRANSFORMER	MAIN SERVICE DISCONNECT	(2) – 3"	(3) – #350 MCM, (1) – #350 MCM N	PARALLEL CONDUCTORS
P4	MAIN SERVICE DISCONNECT	AUTOMATIC TRANSFER SWITCH, "ATS"	(2) – 3"	(3) – #350 MCM, (1) – #350 MCM N, (1) – #1 GRD	PARALLEL CONDUCTORS
P5	STANDBY GENERATOR	AUTOMATIC TRANSFER SWITCH, "ATS"	(2) – 3"	(3) – #350 MCM, (1) – #350 MCM N, (1) – #1 GRD	PARALLEL CONDUCTORS
P6	AUTOMATIC TRANSFER SWITCH, "ATS"	MOTOR CONTROL CENTER, "MCC"	(2) – 3"	(3) – #350 MCM, (1) – #350 MCM N, (1) – #1 GRD	PARALLEL CONDUCTORS
P7	MOTOR CONTROL CENTER, "MCC"	POWER JUNCTION BOX, "PJB"	1 1/2"	(3) – #2, (5) – #14, (1) – #6 GRD	
P8	MOTOR CONTROL CENTER, "MCC"	POWER JUNCTION BOX, "PJB"	1 1/2"	(3) – #2, (5) – #14, (1) – #6 GRD	
P9	MOTOR CONTROL CENTER, "MCC"	POWER JUNCTION BOX, "PJB"	1 1/2"	(3) – #2, (5) – #14, (1) – #6 GRD	
P10	MOTOR CONTROL CENTER, "MCC"	POWER JUNCTION BOX, "PJB"	1 1/2"	(3) – #2, (5) – #14, (1) – #6 GRD	
P11	POWER JUNCTION BOX, "PJB"	PUMP 1	2 1/2"	MANUFACTURER'S CABLE(S)	
P12	POWER JUNCTION BOX, "PJB"	PUMP 2	2 1/2"	MANUFACTURER'S CABLE(S)	
P13	POWER JUNCTION BOX, "PJB"	PUMP 3	2 1/2"	MANUFACTURER'S CABLE(S)	
P14	POWER JUNCTION BOX, "PJB"	PUMP 4	2 1/2"	MANUFACTURER'S CABLE(S)	
P15	LIGHTING PANEL "L"	STANDBY GENERATOR	3/4"	(4) – #12, (1) – #12 GRD	BLOCK HEATER AND BATTERY CHARGER
P16	LIGHTING PANEL "L"	TELEMETRY PANEL, "RTU"	3/4"	(2) – #12, (1) – #12 GRD	
P17	TELEMETRY PANEL, "RTU"	FIBER OPTIC PANEL	3/4"	(2) – #12, (1) – #12 GRD	
P18	LIGHTING PANEL "L"	SITE LIGHTING	3/4"	(2) – #12, (1) – #12 GRD	
P19	LIGHTING PANEL "L"	SHELTER LIGHTING	3/4"	(2) – #12, (1) – #12 GRD	
P20	LIGHTING PANEL "L"	SHELTER RECEPTACLES	3/4"	(2) – #12, (1) – #12 GRD	
P21	LIGHTING PANEL "L"	BOLLARD HYDRAULIC POWER UNIT, "HPU"	3/4"	(2) – #12, (1) – #12 GRD	BOLLARD SYSTEM CONTROL PANEL
P22	LIGHTING PANEL "L"	BOLLARD HYDRAULIC POWER UNIT, "HPU"	3/4"	(3) – #12, (1) – #12 GRD	BOLLARD SYSTEM HYDRAULIC MOTOR
P23	LIGHTING PANEL "L"	BOLLARD HYDRAULIC POWER UNIT, "HPU"	3/4"	(2) – #12, (1) – #12 GRD	BOLLARD SYSTEM HEAT TAPE
P24	BOLLARD HYDRAULIC POWER UNIT, "HPU"	HYDRAULIC BOLLARDS	(2) – 1"	MANUFACTURER CABLE(S)	

CONTROL CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
C1	TELEMETRY PANEL, "RTU"	STANDBY GENERATOR	3/4"	(10) – #14, (1) – #14 GRD	
C2	AUTOMATIC TRANSFER SWITCH, "ATS"	STANDBY GENERATOR	3/4"	(3) – #14, (1) – #14 GRD	
C3	AUTOMATIC TRANSFER SWITCH, "ATS"	TELEMETRY PANEL, "RTU"	3/4"	(8) – #14, (1) – #14 GRD	
C4	TELEMETRY PANEL, "RTU"	MOTOR CONTROL CENTER, "MCC"	1 1/2"	(66) – #14, (1) – #14 GRD	
C5	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	WET WELL 1 INTRUSION SWITCH	3/4"	SO CABLE	
C6	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	WET WELL 1 FLOAT	1 1/4"	FLOAT CABLE	
C7	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	WET WELL 2 INTRUSION SWITCH	3/4"	SO CABLE	
C8	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	WET WELL 2 FLOAT	1 1/4"	FLOAT CABLE	
C9	TELEMETRY PANEL, "RTU"	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	3/4"	(8) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUITS
C10	VALVE VAULT 1 JUNCTION BOX	VALVE VAULT 1 INTRUSION SWITCH	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C11	VALVE VAULT 1 JUNCTION BOX	VALVE VAULT 1 FLOOD SWITCH	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C12	VALVE VAULT 1 JUNCTION BOX	CHECK VALVE LIMIT SWITCH 1	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C13	VALVE VAULT 1 JUNCTION BOX	CHECK VALVE LIMIT SWITCH 2	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C14	TELEMETRY PANEL, "RTU"	VALVE VAULT 1 JUNCTION BOX	3/4"	(8) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUITS
C15	VALVE VAULT 2 JUNCTION BOX	VALVE VAULT 2 INTRUSION SWITCH	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C16	VALVE VAULT 2 JUNCTION BOX	VALVE VAULT 2 FLOOD SWITCH	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C17	VALVE VAULT 2 JUNCTION BOX	CHECK VALVE LIMIT SWITCH 3	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C18	VALVE VAULT 2 JUNCTION BOX	CHECK VALVE LIMIT SWITCH 4	3/4"	(2) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUIT
C19	TELEMETRY PANEL, "RTU"	VALVE VAULT 2 JUNCTION BOX	3/4"	(8) – #14, (1) – #14 GRD	INTRINSICALLY SAFE CIRCUITS
C20	METER VAULT JUNCTION BOX	METER VAULT INTRUSION SWITCH	3/4"	(2) – #14, (1) – #14 GRD	
C21	METER VAULT JUNCTION BOX	METER VAULT FLOOD SWITCH	3/4"	(2) – #14, (1) – #14 GRD	
C22	TELEMETRY PANEL, "RTU"	METER VAULT JUNCTION BOX	3/4"	(4) – #14, (1) – #14 GRD	
C23	BOLLARD ACCESS CARD READER	BOLLARD HYDRAULIC POWER UNIT, "HPU"	3/4"	(2) – #14, (1) – #14 GRD	
C24	TELEMETRY PANEL, "RTU"	BOLLARD HYDRAULIC POWER UNIT, "HPU"	3/4"	(12) – #14, (1) – #14 GRD	
C25	EMERGENCY VEHICLE ACCESS SYSTEM DETECTOR	BOLLARD HYDRAULIC POWER UNIT, "HPU"	3/4"	(4) – #14, (1) – #14 GRD	INTERNAL ENCLOSURE CONDUIT

INSTRUMENTATION CONDUIT AND CONDUCTOR SCHEDULE

CIRCUIT	SOURCE	DESTINATION	TRADE SIZE	(QUANTITY) CONDUCTORS	NOTES
J1	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	WET WELL 1 ULTRASONIC LEVEL TRANSDUCER	1"	MANUFACTURER'S TRANSDUCER CABLE	
J2	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	WET WELL 2 ULTRASONIC LEVEL TRANSDUCER	1"	MANUFACTURER'S TRANSDUCER CABLE	
J3	TELEMETRY PANEL, "RTU"	INSTRUMENTATION AND CONTROL JUNCTION BOX, "ICJB"	1"	(2) 2 CONDUCTOR SHIELDED CABLES	
J4	TELEMETRY PANEL, "RTU"	FLOW METER	(2) 1 1/2"	MANUFACTURER'S CABLE(S)	
J5	TELEMETRY PANEL, "RTU"	MOTOR CONTROL CENTER, "MCC"	2 1/2"	(8) 2 CONDUCTOR SHIELDED CABLES (6) CAT 5E SHIELDED ETHERNET CABLES	
J6	TELEMETRY PANEL, "RTU"	BOLLARD ACCESS CARD READER	1"	(1) CAT 5E ETHERNET CABLE	
J7	TELEMETRY PANEL, "RTU"	SITE SECURITY CAMERA	1"	(1) CAT 5E ETHERNET CABLE	
J8	TELEMETRY PANEL, "RTU"	FIBER OPTIC PANEL	1"	(2) CAT 5E ETHERNET CABLES	
J9	FIBER OPTIC PANEL	FIBER OPTIC JUNCTION BOX	2"	(2) FIBER OPTIC CABLES (12-STRAND)	
J10	FIBER OPTIC JUNCTION BOX	FIBER OPTIC PATCH CABINET AT ALDERWOOD MALL BLVD & 33RD AVE W	–	FIBER OPTIC CABLE (12-STRAND)	ROUTE PROPOSED CABLE IN EXISTING CONDUIT
J11	FIBER OPTIC JUNCTION BOX	FIBER OPTIC PATCH CABINET AT ALDERWOOD MALL BLVD & ALDERWOOD MALL PKWY	–	FIBER OPTIC CABLE (12-STRAND)	ROUTE PROPOSED CABLE IN EXISTING CONDUIT

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER NAME	MANUFACTURER CATALOG NO.	LAMP QTY. *	LAMP CATALOG NO.	REMARKS
A1	LED LIGHT FIXTURE, 120 VAC, 4'–4" LONG, 45 WATT, 60,000 HOUR LED, HIGH EFFICIENCY DRIVER, HIGH–IMPACT ACRYLIC LENS, MOLDED FIBERGLASS HOUSING, CEILING MOUNTED, U.L. LISTED FOR WET LOCATIONS.	LITHONIA	FEM L48 6000LM IMAFL	1	INTEGRATED LED	
A2	LED POLE MOUNTED LIGHT – (1)–140W 80C LED. 530mA, 5000K COLOR TEMPERATURE 120VAC, WITH FUSE PROTECTION, PROVIDE FIXTURE WITH BRACKETRY TO MOUNT TO LIGHT POLE. PROVIDE FIXTURE WITH INTEGRATED PHOTOCELL CONTROL. U.L. LISTED FOR WET LOCATIONS., 20FT HOT–ROLLED CARBON STEEL POLE.	LITHONIA	LIGHT – DSX2 LED P1 50K TFTM 120 SPA SF DDBXD POLE – SSS 20 4C DDB OR EQUAL	N/A	140 WATT	PROVIDE WITH PHOTOCELL CONTROLLER

* NUMBER OF LAMPS PER FIXTURE

ELECTRICAL EQUIPMENT AND INSTRUMENTATION SCHEDULE

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
A	MAIN SERVICE DISCONNECT SWITCH – NEMA 4X SS ENCLOSURE, HEAVY DUTY BREAKER, SERVICE ENTRANCE RATED, ELECTRONIC TRIP, 600 AMP, 480 VOLT, 3φ 65 KAIC WITHSTAND, CIRCUIT BREAKER SWITCH.	SIEMENS	SHLD6 OR EQUAL
B	AUTOMATIC TRANSFER SWITCH – NEMA 3R ENCLOSURE, 600 AMP, 480 VOLT, 3 PHASE, 3 POLE.	SEE SPECIFICATIONS	SEE SPECIFICATIONS
C	INTRUSION ALARM SWITCH – CONTRACTOR SHALL SELECT ACTUATOR LEVER ARM BEST SUITED FOR MOUNTING CONFIGURATION. SWITCH SHALL BE A HAZARDOUS LOCATION SEALED SWITCH RATED FOR CLASS 1 DIVISION 1 LOCATIONS.	ALLEN–BRADLEY	HAZARDOUS LOCATION 802XR SERIES
D	FLOW METER	SEE SPECIFICATIONS	SEE SPECIFICATIONS
E	ULTRASONIC LEVEL TRANSMITTER	SEE SPECIFICATIONS	SEE SPECIFICATIONS
F	WET WELL LEVEL FLOAT SWITCH	SEE SPECIFICATIONS	SEE SPECIFICATIONS
G	FLOOD SWITCH – N.O. REED TYPE FLOAT SWITCH, 20 VA. SEE DWG NO. E11 FOR DETAILS.	OMEGA	LVN–20 OR EQUAL
H	CHECK VALVE LIMIT SWITCH	SEE SPECIFICATIONS	SEE SPECIFICATIONS
J	POLE–MOUNTED 360 DEGREE PTZ NETWORK SECURITY CAMERA. 1920x1080 RESOLUTION, 30X OPTICAL ZOOM, CONTINUOUS 360 DEGREE PAN, POWER OVER ETHERNET. SEE DWG NO. E10 FOR DETAIL.	AXIS	P5635–E MK II
K	FIBER OPTIC PANEL CONTAINING FIBER OPTIC PATCH PANEL, FIBER MODEM(S), AND DEDICATED MODEM RECEPTACLE(S). PANEL SHALL BE DESIGNED AND CONSTRUCTED IN CONFORMANCE WITH ALL CITY OF LYNNWOOD SPECIFICATIONS.	PER CITY OF LYNNWOOD SPECIFICATIONS	PER CITY OF LYNNWOOD SPECIFICATIONS
L	EMERGENCY VEHICLE ACCESS SYSTEM DETECTOR. 24 VDC, 200 FT RANGE, 60 DEGREE FIELD OF VIEW, SPST RELAY OUTPUT.	STROBESWITCH	SSLC–1014
M	ACCESS CARD READER	SEE SPECIFICATIONS	SEE SPECIFICATIONS

PANEL SCHEDULE L

NO. L LOCATION: MOTOR CONTROL CENTER
SERVING: PUMP STATION LOADS

208/120 VOLTS 3φ 4 WIRE
60 AMP MAIN

CIRCUIT DESCRIPTION	KVA	AMP		AMP	KVA	CIRCUIT DESCRIPTION
SHELTER LIGHTING	0.24	20	1 — 2	20	1.00	TELEMETRY PANEL, "RTU"
SHELTER RECEPTACLE	0.36	20	3 — 4	20	1.50	STANDBY GENERATOR BLOCK HEATER
SITE LIGHTING	0.18	20	5 — 6	20	0.20	STANDBY GENERATOR BATTERY CHARGER
HYDRAULIC BOLLARD SYSTEM HYDRAULIC PUMP	6.00	30	7 — 8	20	1.00	HYDRAULIC BOLLARD SYSTEM CONTROL PANEL
–	–	3P	9 — 10	20	0.50	HYDRAULIC BOLLARD SYSTEM HEAT TAPE
–	–	3P	11 — 12	20	–	SPARE
SPARE	–	20	13 — 14	20	–	SPARE
SPARE	–	20	15 — 16	20	–	SPARE
SPARE	–	20	17 — 18	20	–	SPARE
SPARE	–	20	19 — 20	20	–	SPARE
SPACE	–	–	21 — 22	–	–	SPACE
SPACE	–	–	23 — 24	–	–	SPACE
SPACE	–	–	25 — 26	–	–	SPACE
SPACE	–	–	27 — 28	–	–	SPACE
SPACE	–	–	29 — 30	–	–	SPACE

CONNECTION LOAD: 11.0 KVA 30.6 AMPS

DEMAND: LIGHTING & RECEPTACLE LOAD

DEMAND LOAD: 11.0 KVA 30.6 AMPS

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SIGNED: 03/27/19

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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

LYNNWOOD WASHINGTON

ELECTRICAL SCHEDULES

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR BIDDING	03/27/19	CMP

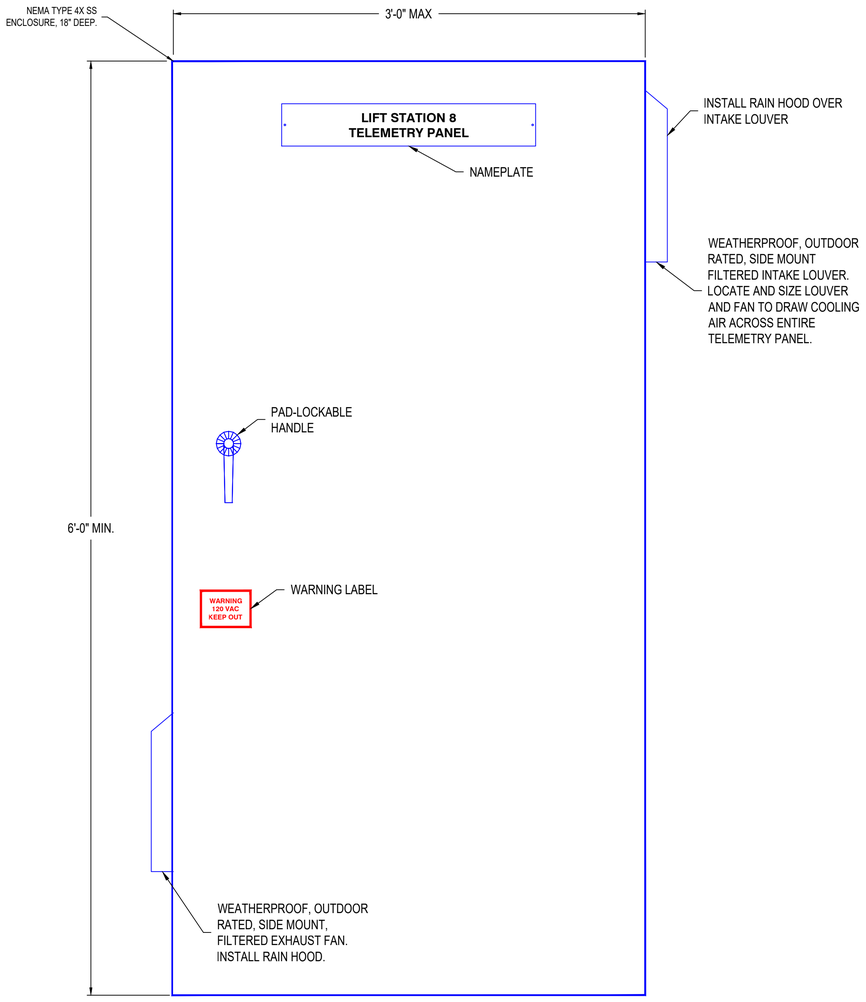
REVISIONS

RJF

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-ELEC10.DWG
SAVE DATE: Mar 25, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

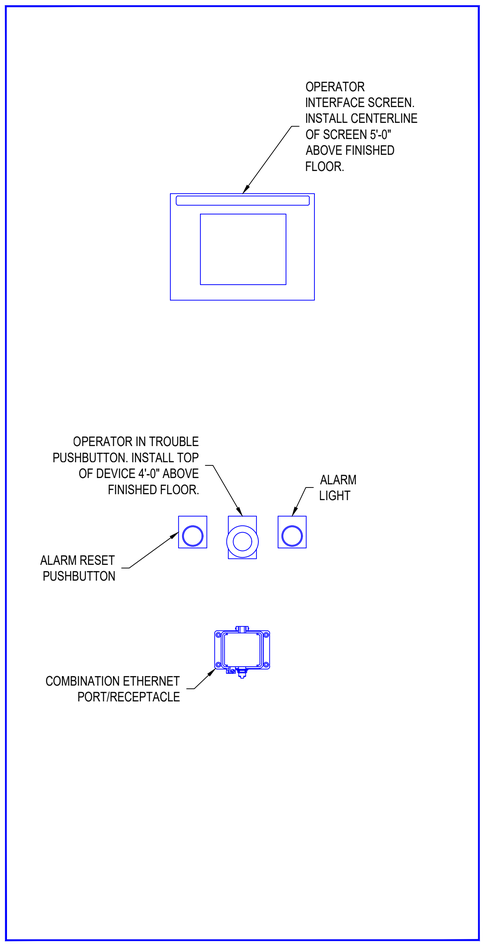
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E12
SHEET NO.: 39 / 48



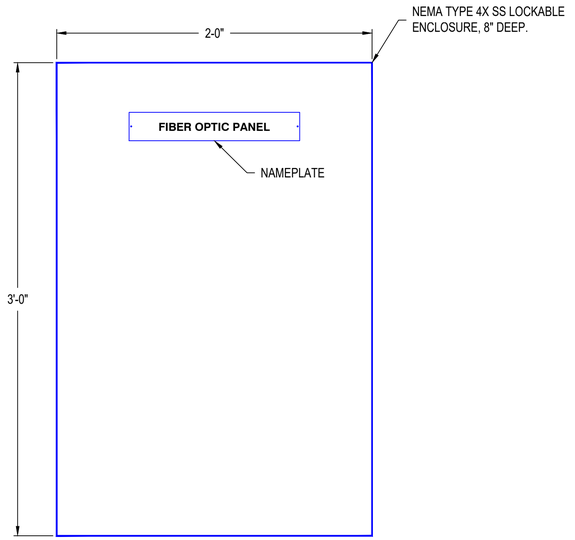
TELEMETRY PANEL EXTERIOR LAYOUT

NOT TO SCALE



TELEMETRY PANEL INTERIOR SWING DOOR LAYOUT

NOT TO SCALE



FIBER OPTIC PANEL EXTERIOR LAYOUT

NOT TO SCALE

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SIGNED: 03/27/19

CHRISTOPHER MICHAEL ROGERS — STATE OF WASHINGTON — 45317 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

RTU - PANEL LAYOUT

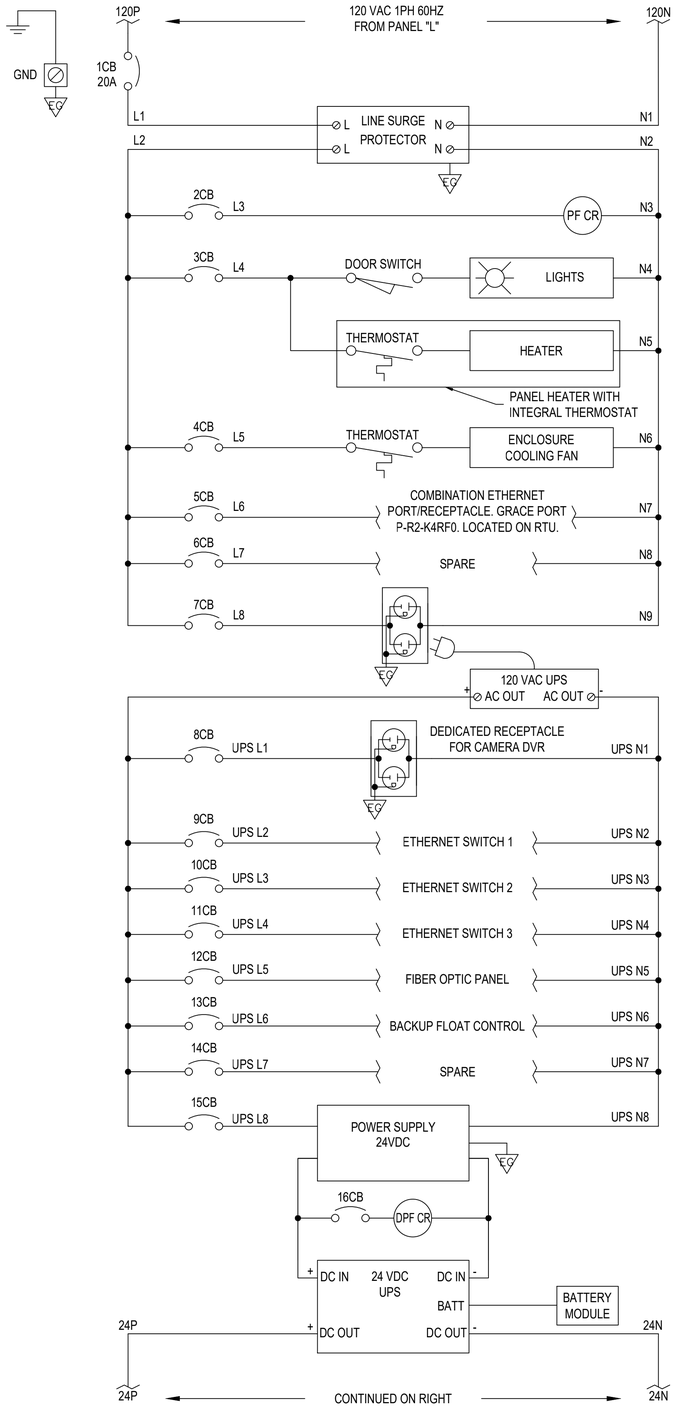
JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LSS-D-ELEC11.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

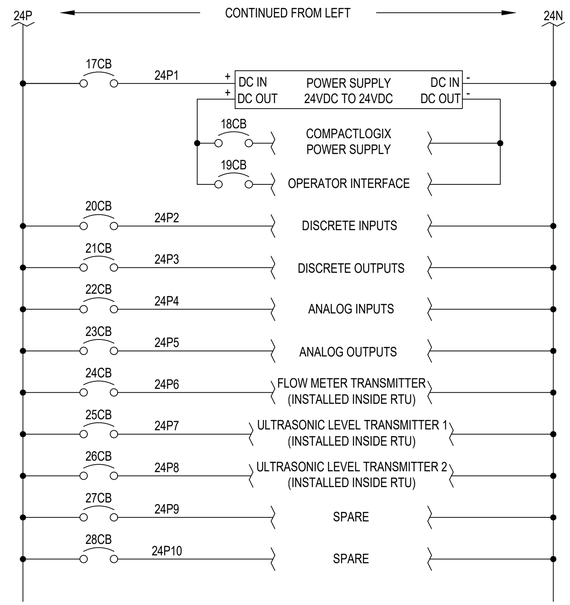
REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW
1	ISSUED FOR BIDDING	03/27/19	CMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

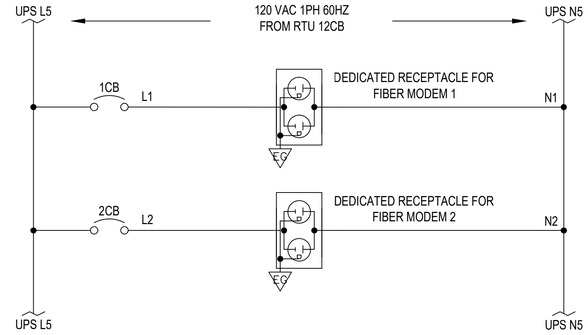
DWG NO.: E13
SHEET NO.: 40
48





RTU POWER LAYOUT

NOT TO SCALE



FIBER OPTIC PANEL POWER LAYOUT

NOT TO SCALE

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STATE OF WASHINGTON
45317
REGISTERED
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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS

LYNNWOOD WASHINGTON

RTU - POWER DIAGRAM

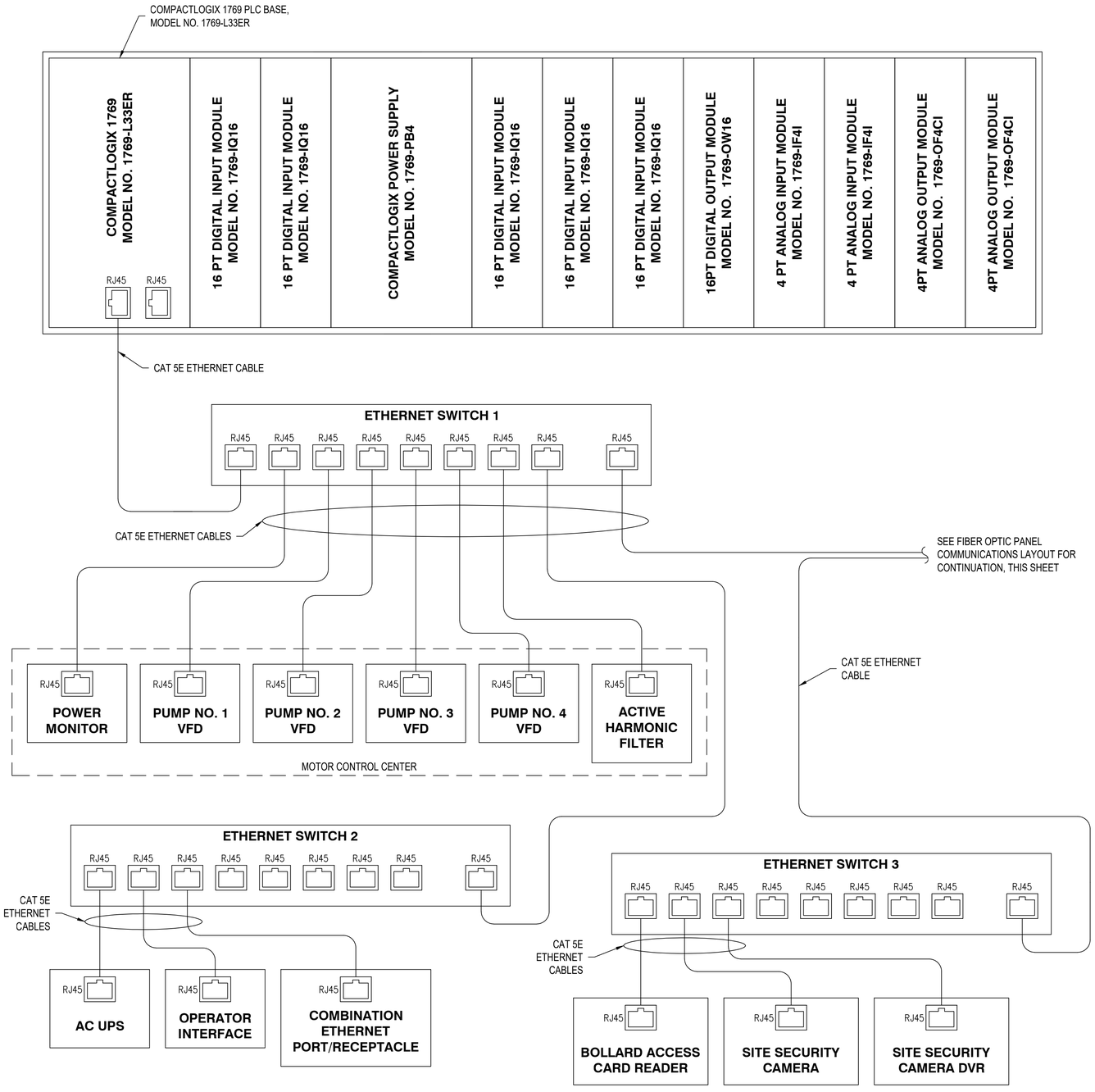
NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR BIDDING	03/27/19	OMP
			REVIEW

REVISIONS

ENGINEER: KMS
REVIEWED: CMR
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-ELEC11.DWG
JOB NO.: 117-088
BY: RJF

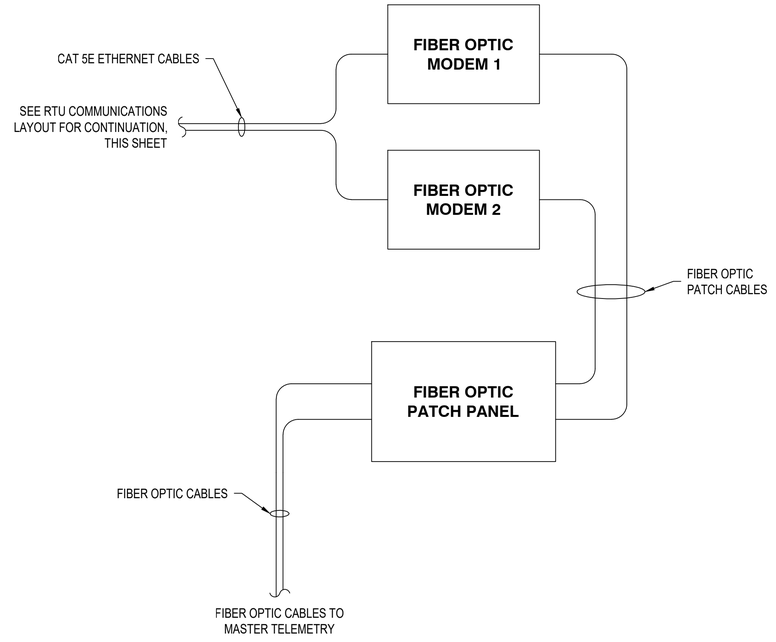
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E14
SHEET NO.: 41
48



RTU COMMUNICATIONS LAYOUT

NOT TO SCALE



FIBER OPTIC PANEL COMMUNICATIONS LAYOUT

NOT TO SCALE

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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

RTU - COMMUNICATIONS DIAGRAM

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-ELEC11.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E15
SHEET NO.: 42
48

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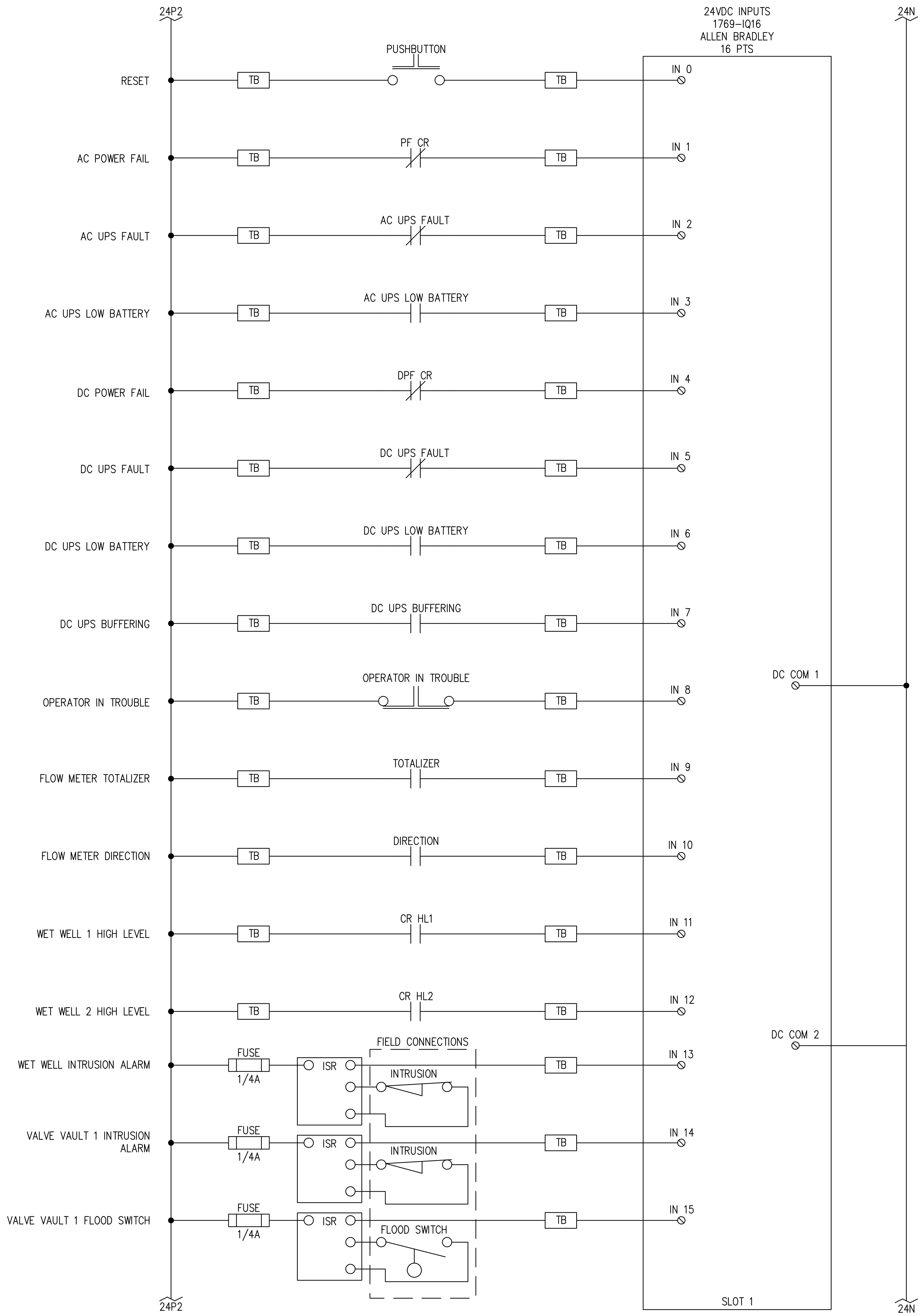
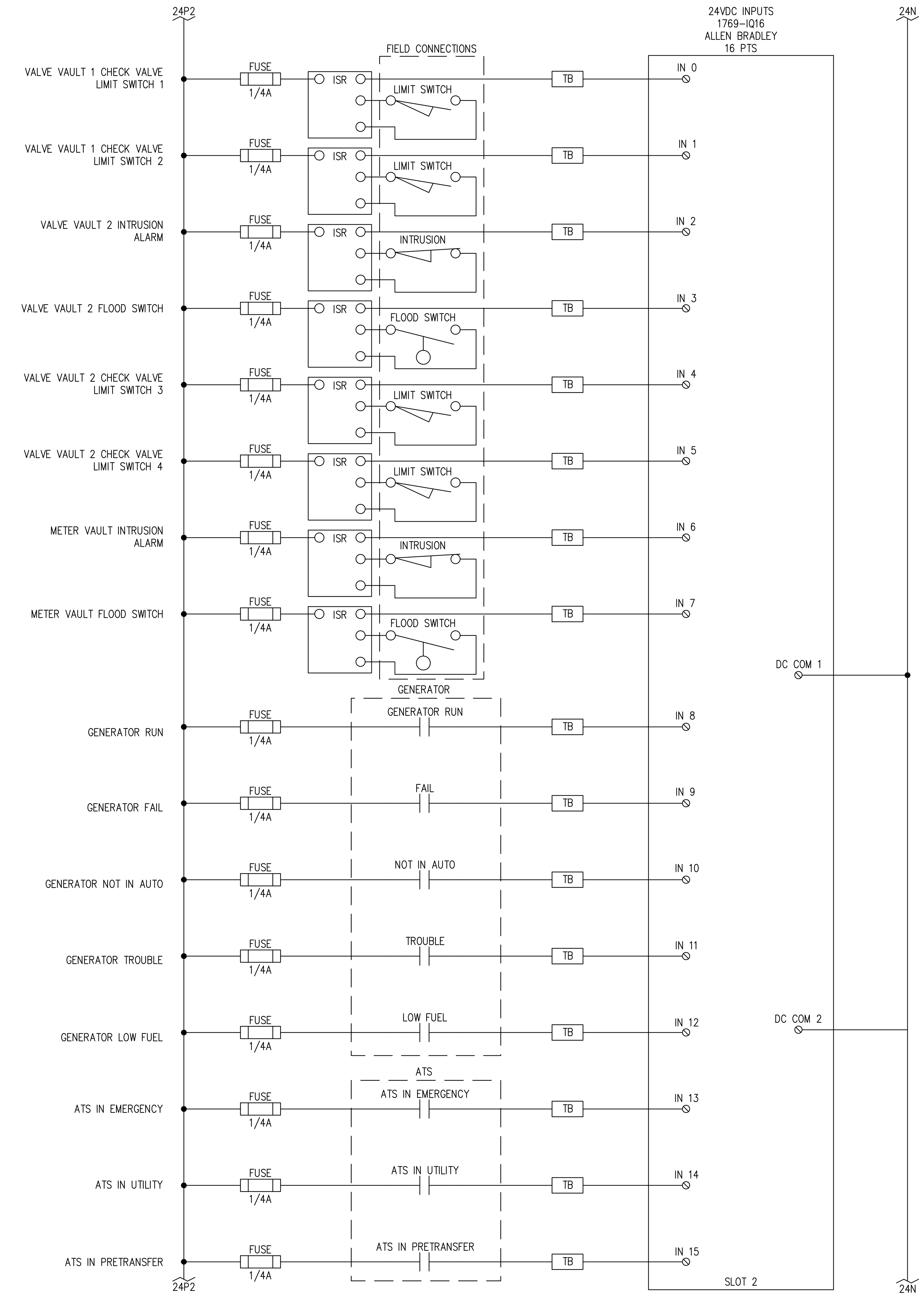
UNDERGROUND SERVICE



DIGITAL INPUTS, SLOT 1

NOT TO SCALE



DIGITAL INPUTS, SLOT 2

NOT TO SCALE

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SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

LYNNWOOD WASHINGTON

RTU - PLC INPUT & OUTPUT WIRING I

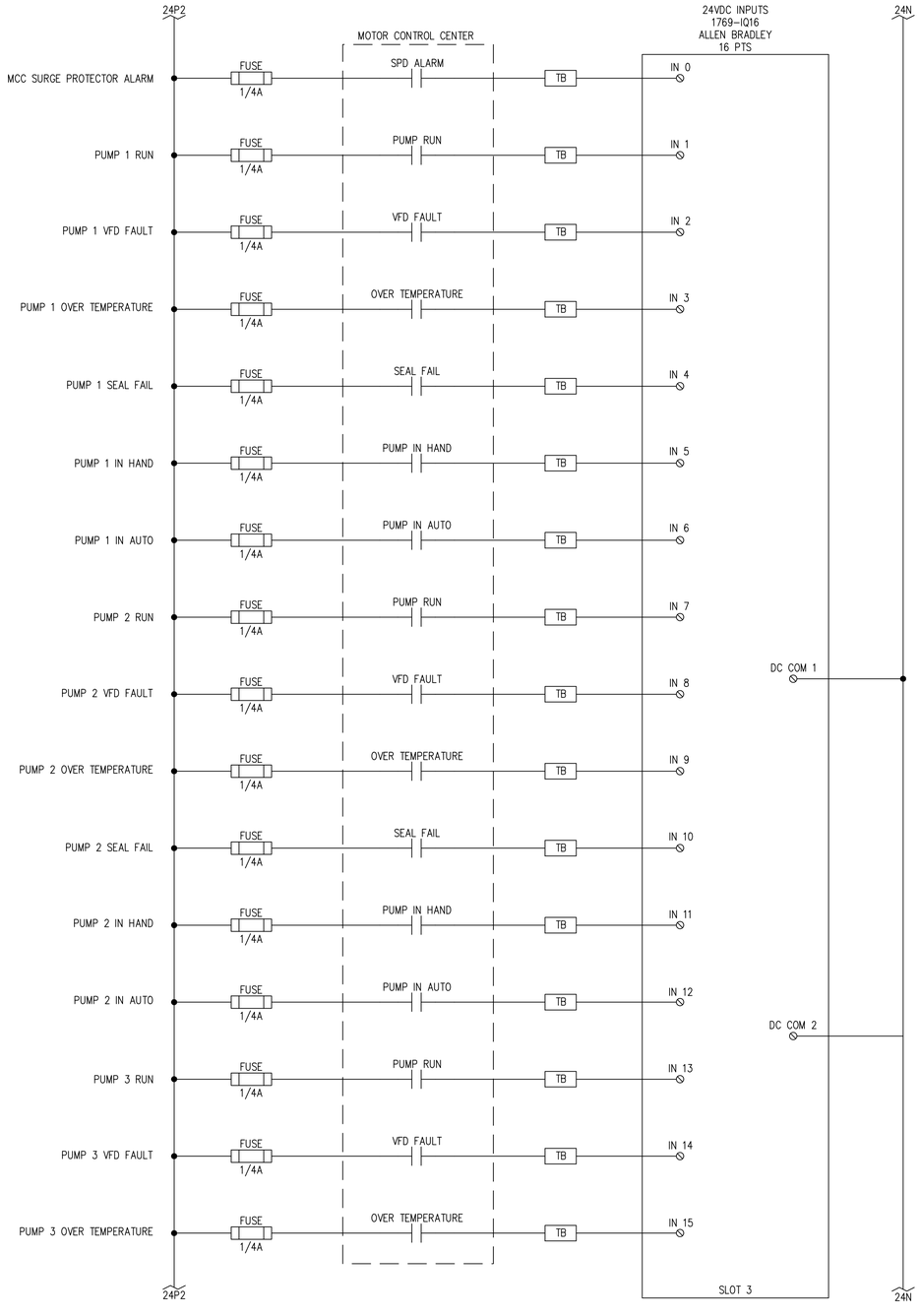
NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

REVISIONS

ENGINEER: KMS
REVIEWED: CMR
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
CLIENT: LYNN
FILENAME: LS8-D-ELEC11.DWG
JOB NO.: 117-098

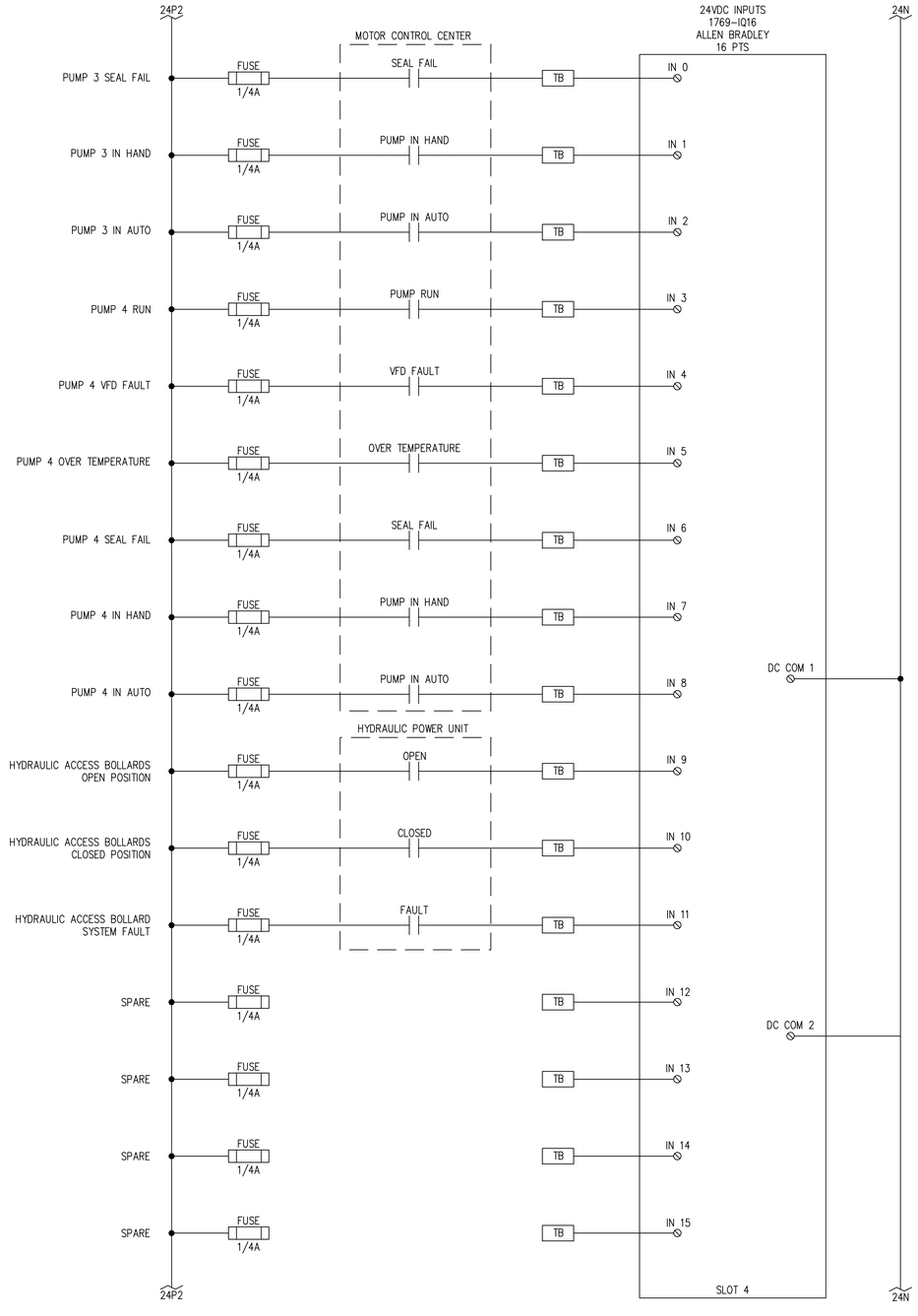
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E16
SHEET NO.: 43 / 48



DIGITAL INPUTS, SLOT 3

NOT TO SCALE



DIGITAL INPUTS, SLOT 4

NOT TO SCALE

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS
LYNNWOOD WASHINGTON

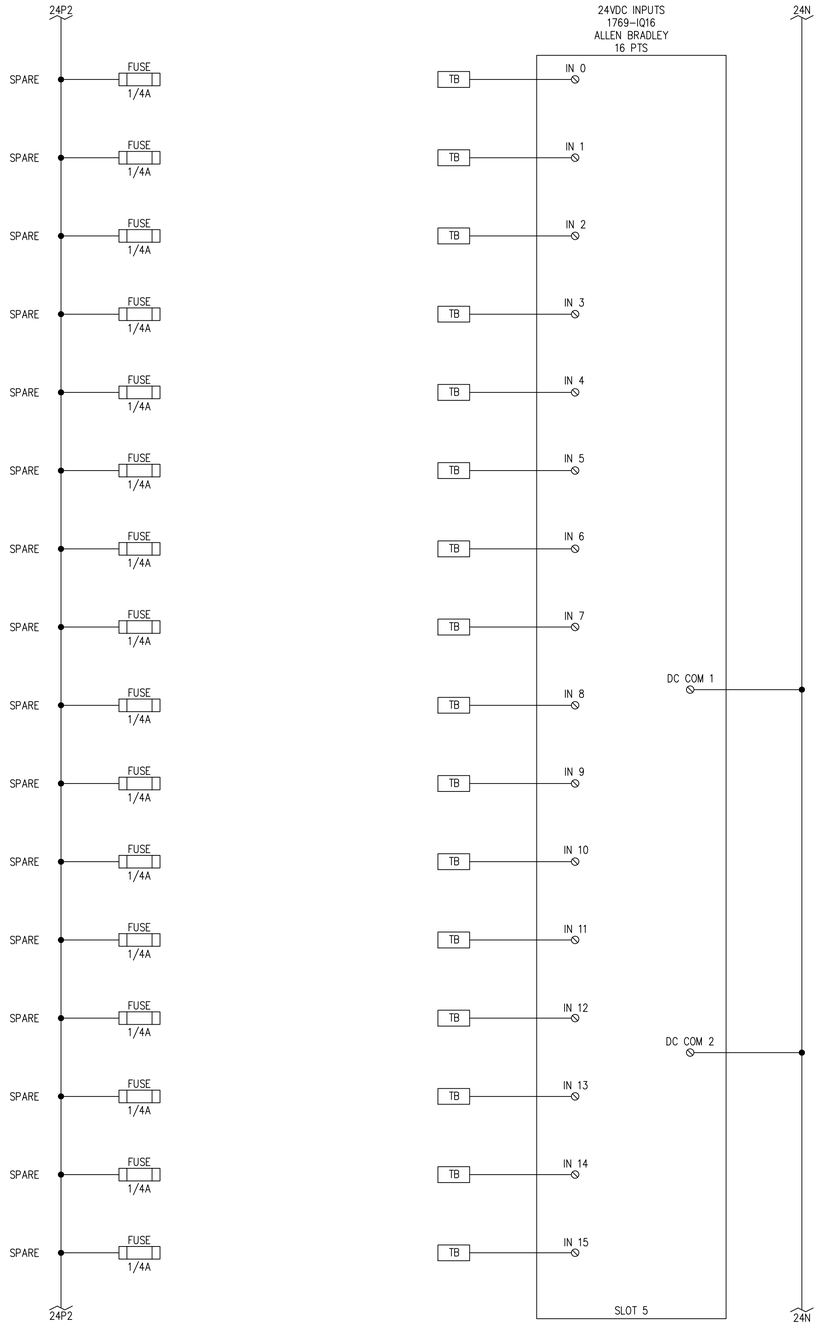
RTU - PLC INPUT & OUTPUT WIRING II

REVISIONS					
NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

JOB NO.: 117-088
CLIENT: LYNN
FILENAME: LS8-D-ELEC11.DWG
DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

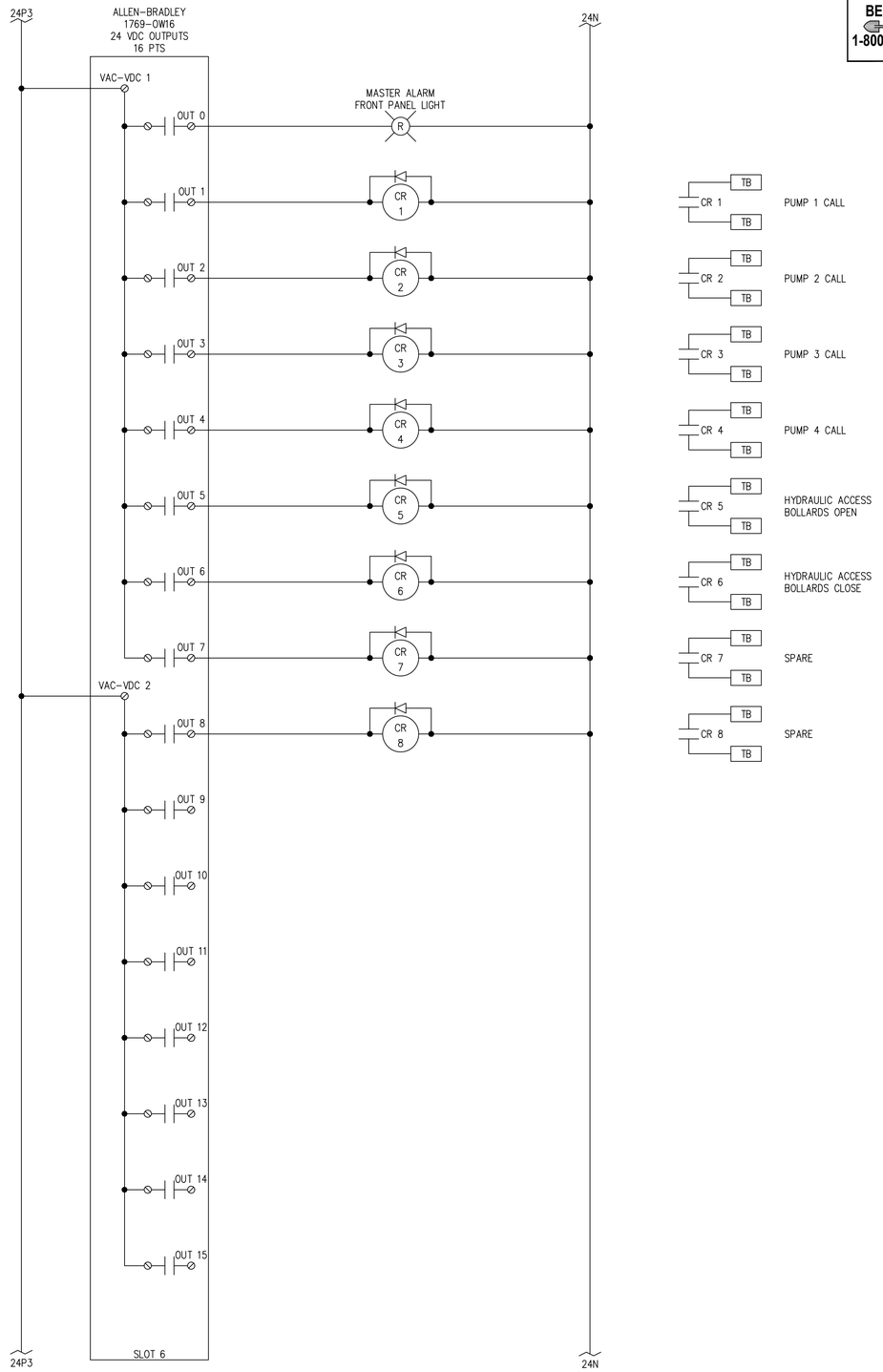
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E17
SHEET NO.: 44 48



DIGITAL INPUTS, SLOT 5

NOT TO SCALE



DIGITAL OUTPUTS, SLOT 6

NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CHRISTOPHER MICHAEL TRUMBO
STATE OF WASHINGTON
45317
REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 8
IMPROVEMENTS

LYNNWOOD WASHINGTON

RTU - PLC INPUT & OUTPUT WIRING III

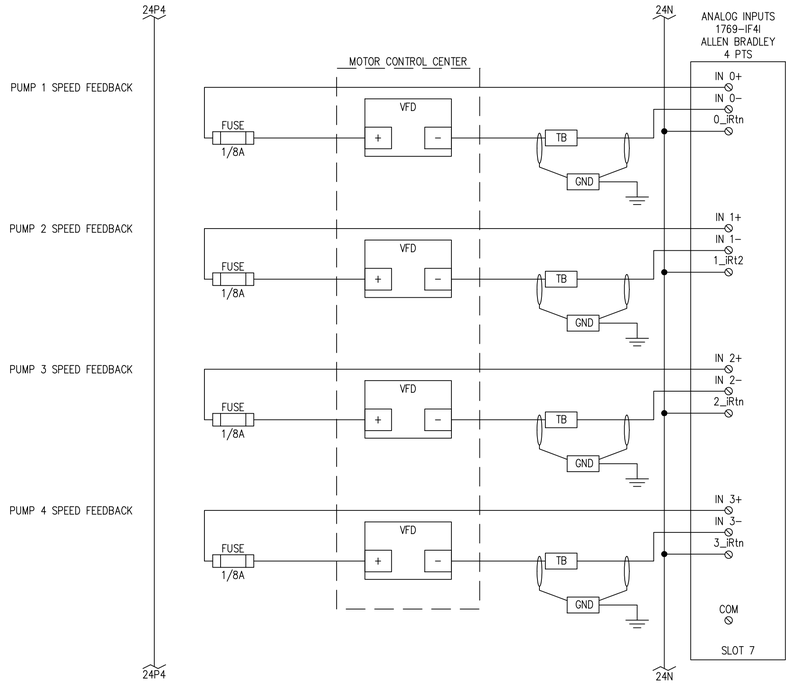
ENGINEER: KMS	SAVE DATE: Mar 26, 2019
REVIEWED: CMR	PLOT DATE: Mar 26, 2019
CLIENT: LYNN	FILENAME: LS8-D-ELEC11.DWG
JOB NO.: 117-038	

REVISIONS

NO.	DESCRIPTION	DATE	BY	REVIEW
0	ISSUED FOR BIDDING	03/27/19	OMP	RJF

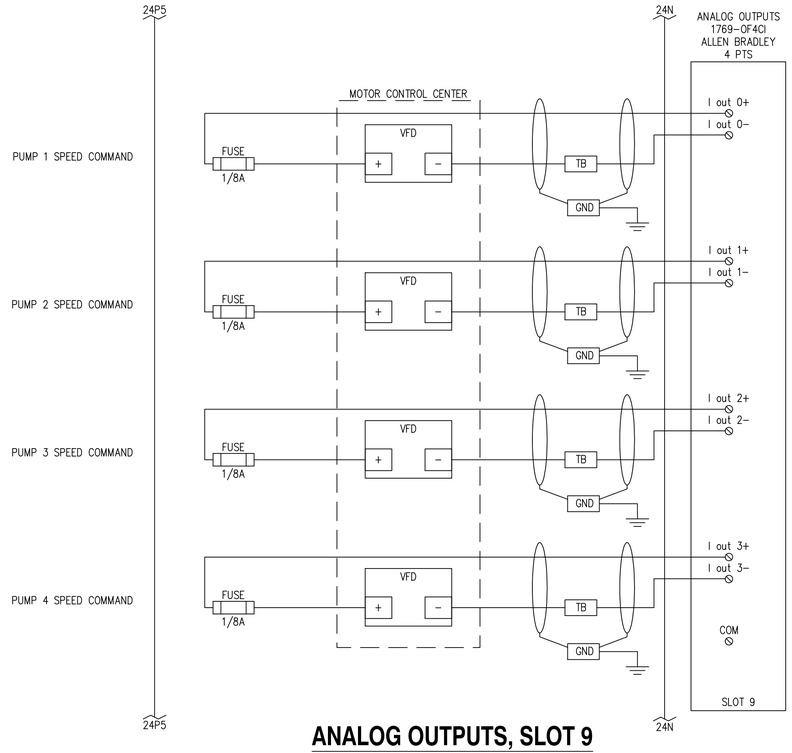
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E18
SHEET NO.: 45 48



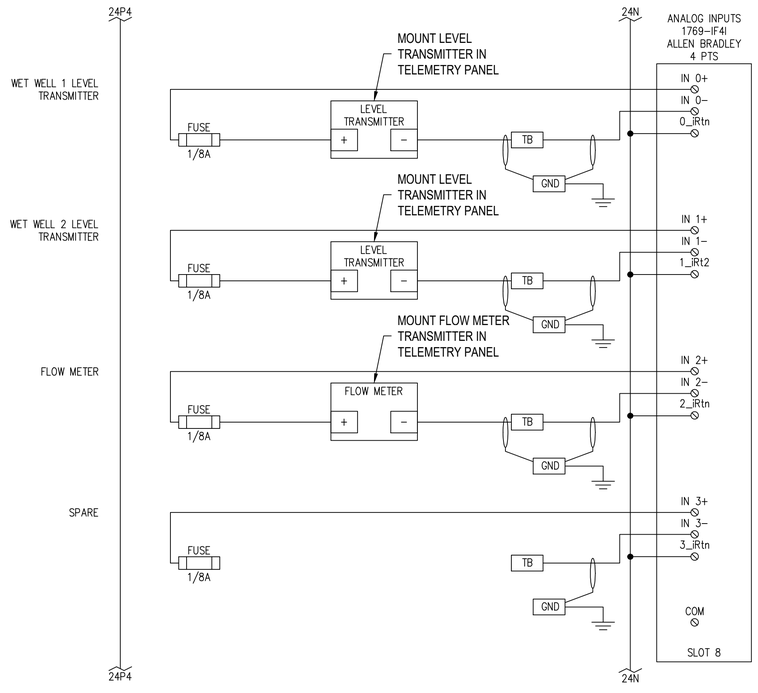
ANALOG INPUTS, SLOT 7

NOT TO SCALE



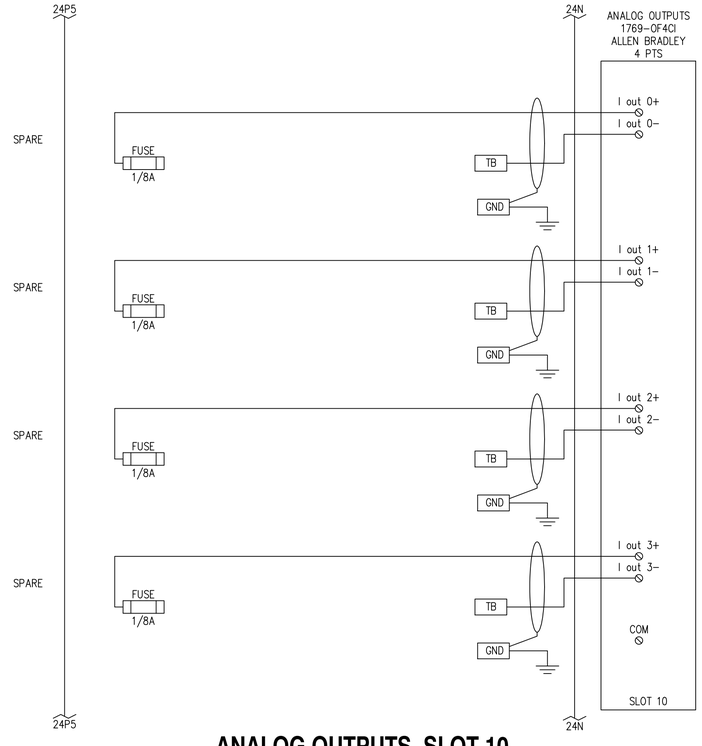
ANALOG OUTPUTS, SLOT 9

NOT TO SCALE



ANALOG INPUTS, SLOT 8

NOT TO SCALE



ANALOG OUTPUTS, SLOT 10

NOT TO SCALE

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CITY OF LYNNWOOD
LIFT STATION 8 IMPROVEMENTS

LYNNWOOD WASHINGTON

RTU - PLC INPUT & OUTPUT WIRING IV

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS8-D-ELEC11.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 26, 2019
ENGINEER: KMS
REVIEWED: CMR

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	CMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: E19
SHEET NO.: 46 48

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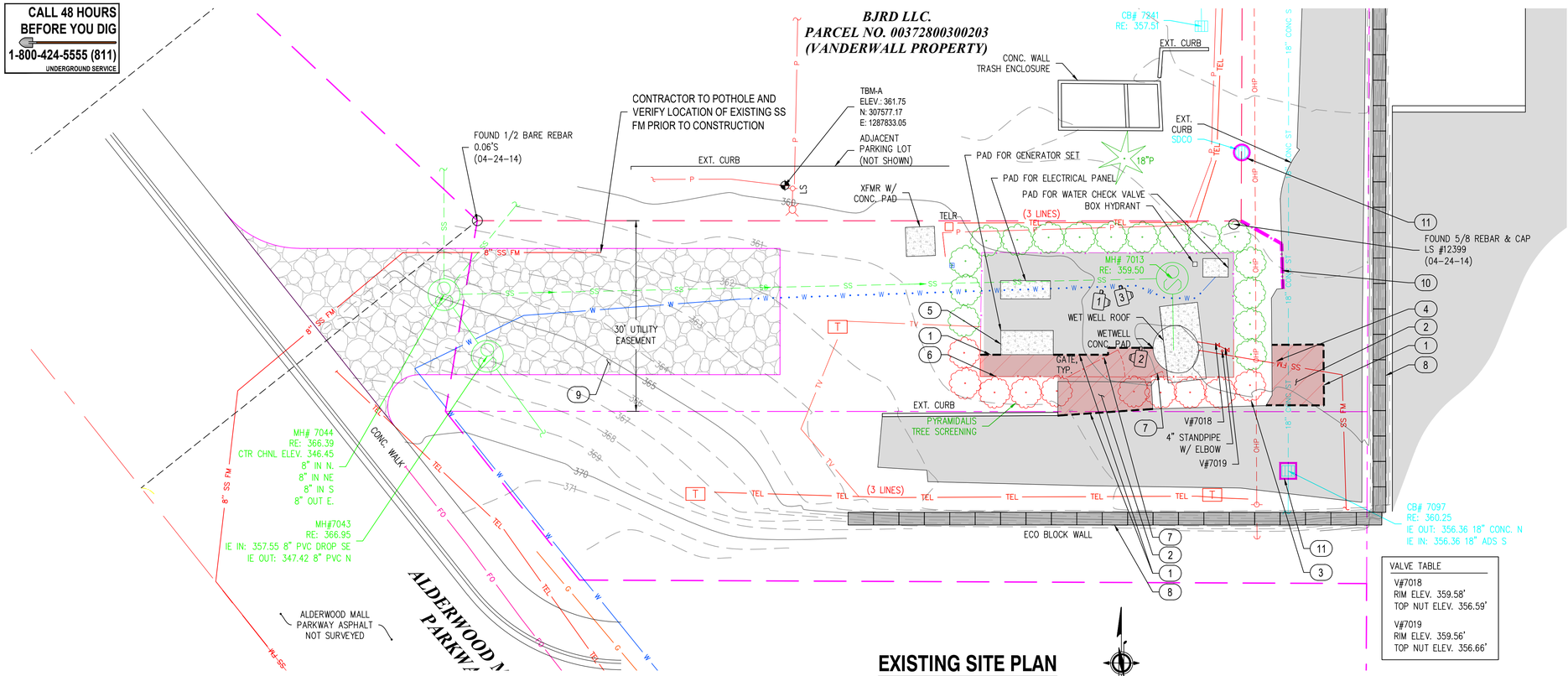
UNDERGROUND SERVICE



VALVE TABLE

V#7018
RIM ELEV. 359.58'
TOP NUT ELEV. 356.59'

V#7019
RIM ELEV. 359.56'
TOP NUT ELEV. 356.66'

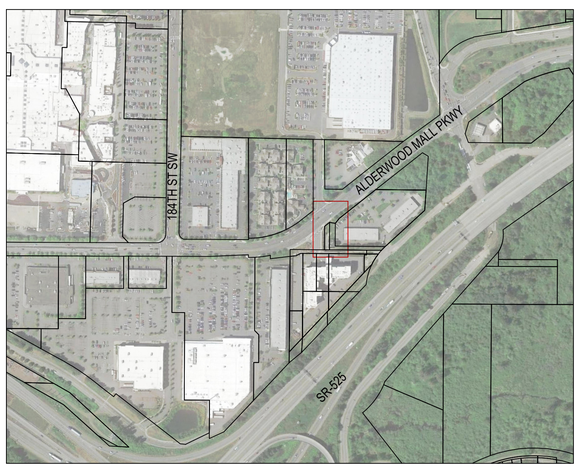
EXISTING SITE PLAN
1" = 10'

DEMOLITION NOTES

1. SAWCUT EXISTING ASPHALT.
2. REMOVE APPROX. 249 SF OF ASPHALT TO SUBGRADE.
3. REMOVE AND PROPERLY DISPOSE OF TREE AND ROOT BALL. REMOVE ROOTS AND OTHER ORGANICS AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS. (TYPICAL ALL TREES IDENTIFIED IN RED).
4. REMOVE EXISTING FORCEMAIN AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
5. REMOVE THE EXISTING EMERGENCY GENERATOR AND CONCRETE PAD TO FACILITATE CONSTRUCTION OF THE PROPOSED GRAVITY MAIN. PROVIDE BACKUP PUMPING SYSTEM FOR ANY/ALL SCENARIOS WHERE IN THE THE EXISTING INFRASTRUCTURE DOES NOT HAVE FULL REDUNDANCY. VACTOR BYPASS OF THE LIFT STATION SHALL BE NECESSARY TO FACILITATE CORING OF THE EXISTING WET WELL AND/OR MAKING CONNECTIONS TO THE EXISTING SYSTEM.
6. REMOVE APPROX. 52 LF OF EXISTING FENCE AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
7. TEMPORARILY REMOVE EXISTING GATE.
8. DO NOT DISTURB EXISTING WALL.
9. PROVIDE CONSTRUCTION ENTRANCE PER CITY STANDARD DETAIL STD2-9 ON THIS SHEET.
10. PROVIDE SILT FENCE PER CITY STANDARD DETAIL STD2-5 ON DWG NO. C11.
11. PROVIDE INLET PROTECTION PER DETAIL ON DWG NO. C11.

NOTES

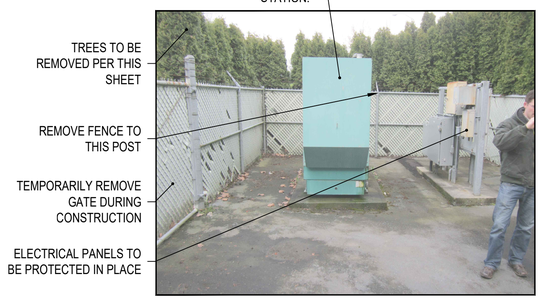
- SITE ACCESS SHALL BE LIMITED TO THE EAST ACCESS ROAD AND NOT FROM THE VANDERWALL PROPERTY TO THE NORTH.



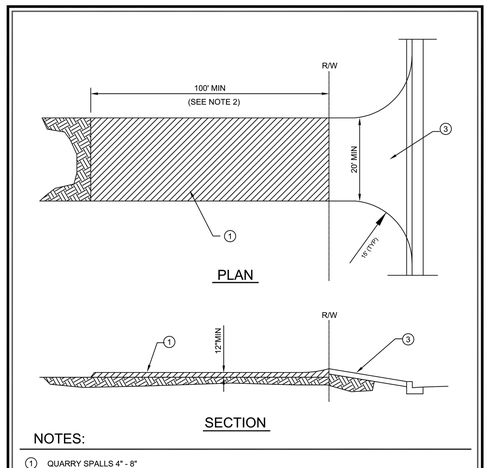
VICINITY MAP
1" = 400'

EXISTING SITE PHOTO

EXISTING SITE PHOTO



EXISTING SITE PHOTO



NOTES:

1. QUARRY SPALLS 4" - 8"
2. SEE FIGURE 4.2 IN THE CURRENT ADOPTED STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON DETAILS. NOTE: THE MINIMUM 100LF OF ENTRANCE SHALL BE REDUCED TO THE MAXIMUM PRACTICABLE SIZE WHEN THEN SIZE OR CONFIGURATION OF THE SITE DOES NOT ALLOW THE FULL LENGTH (100LF).
3. EXISTING DRIVEWAY RAMP, OR SITE ACCESS ROAD 20' WIDE MIN. MATERIAL MUST BE EQUAL TO OR BETTER THAN SPECIFIED IN NOTE 1.
4. A SEPARATION GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENT FROM PUMPING UP INTO THE ROCK PAD. THE GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS:

GRAB TENSILE STRENGTH (ASTM D4751)	200 PSI MIN.
GRAB TENSILE ELONGATION (ASTM D4632)	30% MAX.
MULLEN BURST STRENGTH (ASTM D3786-80A)	400 PSI MIN.
AOS (ASTM D4751)	20-45 (U.S. STANDARD SIEVE SIZE)

LYNNWOOD WASHINGTON PUBLIC WORKS
TEMPORARY CONSTRUCTION ENTRANCE
J:\Standard_Plans

DRAWING NUMBER	STD2-9
SCALE	NONE
REVISION DATE	03/17
DEPARTMENT	PW

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RYAN J. FERGUSON — STATE OF WASHINGTON — 49451 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 4 AND 8 IMPROVEMENTS
SCHEDULE A: LIFT STATION 4

LS4 EXISTING SITE PLAN

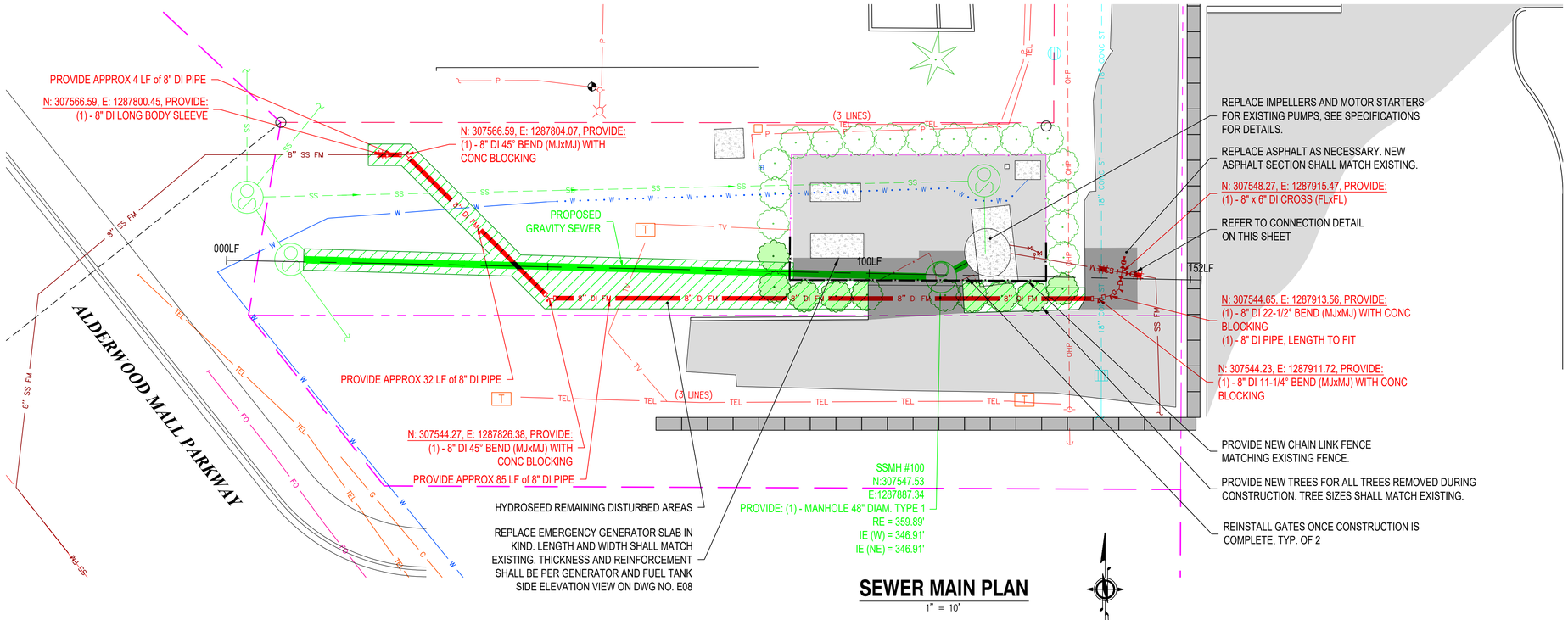
NO.	DESCRIPTION	DATE	BY
3	ISSUED FOR BIDDING	03/27/19	CMP
			RJF
			REVIEW

REVISIONS

JOB NO.: 117-098
CLIENT: LYNN
FILENAME: LS4-PHI-D-CIV01.DWG
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 27, 2019
ENGINEER: CMP
REVIEWED: RJF

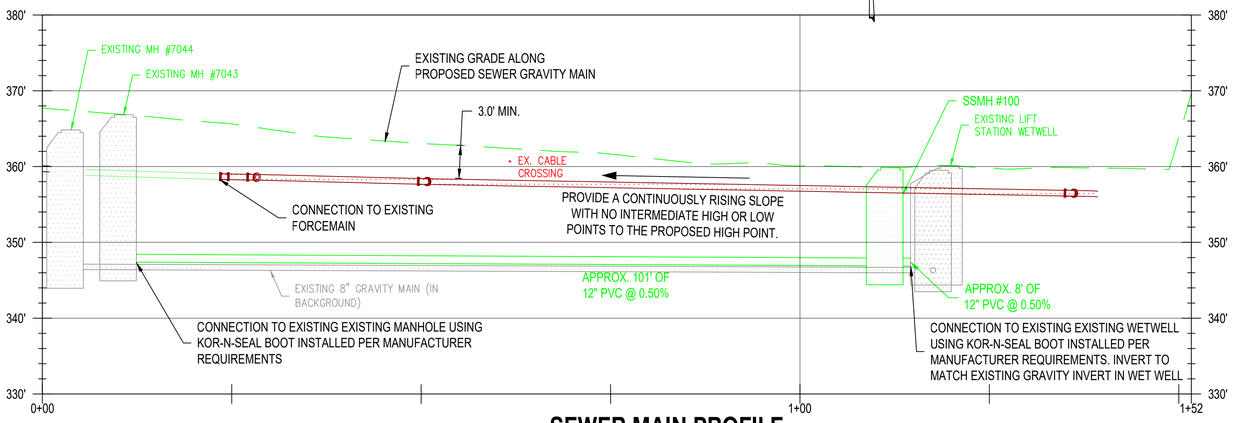
SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C100
SHEET NO.: 47 / 48



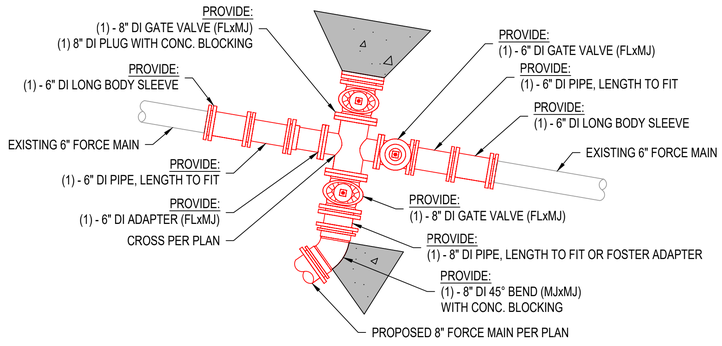
SEWER MAIN PLAN

1" = 10'



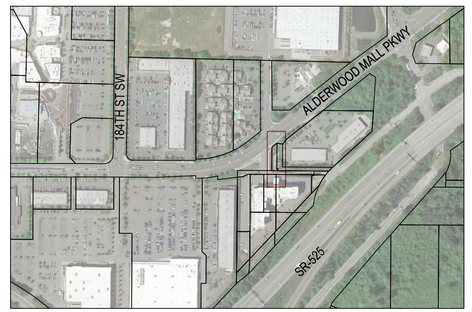
SEWER MAIN PROFILE

1" = 10', V: 1" = 10'



CONNECTION DETAIL

NOT TO SCALE



VICINITY MAP

1" = 400'

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SEWER NOTES

- TRENCH SECTION FOR SEWER GRAVITY AND FORCEMAIN SHALL BE PER CITY OF LYNNWOOD STANDARD DRAWING STD6-12 ON DWG NO. C10.
- ANY LANDSCAPED OR VEGETATED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO EXISTING OR BETTER CONDITION.
- ALL THRUST BLOCKING SHALL BE PER CITY STANDARD DRAWING STD 5-5 ON DWG NO. C12.

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SIGNED: 03/27/19

RYAN J. FERGUSON
STATE OF WASHINGTON
49451
REGISTERED
PROFESSIONAL ENGINEER
SIGNED: 03/27/19

CITY OF LYNNWOOD
LIFT STATION 4 AND 8 IMPROVEMENTS
SCHEDULE A: LIFT STATION 4
LYNNWOOD WASHINGTON

LS4 SANITARY SEWER PLAN & PROFILE

ENGINEER: OMP
REVIEWED: RJF
SAVE DATE: Mar 26, 2019
PLOT DATE: Mar 27, 2019
CLIENT: LYNN
FILENAME: LS4-PH1-D-CIV03.DWG
JOB NO.: 117-088

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
1	03/27/19	ISSUED FOR BIDDING	OMP	RJF

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C101
SHEET NO.: 48