

VALLEY VIEW STORM SEWER IMPROVEMENTS

WASTEWATER COLLECTION AND TREATMENT SYSTEM IMPROVEMENTS PHASE 3C

WATER POLLUTION CONTROL DIVISION
CITY OF WHEELING, WV

MARCH 2024



UTILITY COMPANIES		
NOTE: UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD MARKINGS (BY OTHERS) AND AVAILABLE RECORDS, AND AS SUCH, SHOULD BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY - CALL BEFORE YOU DIG!		
SEWERS: WATER POLLUTION CONTROL DIVISION 2516 MAIN STREET WHEELING, WV 26003 (304) 234-3874 BOB WEISNER	WATER: WHEELING WATER DEPT. 9 ARMORY DRIVE WHEELING, WV 26003 (304) 234-3849 CHRIS BEISWANGER	ELECTRIC: AEP 1-800-852-6942 CHRISTINA HARPO (304) 234-3106
STREETLIGHTS: APPALACHIAN POWER (304) 234-3106	GAS: MOUNTAINEER GAS 19TH AND WOOD STREET WHEELING, WV 26003 1-888-420-4427 x 85202 RON TROWBRIDGE (304) 276-2520	GAS: TC ENERGY CLAYTON COSS (724) 809-3239
TELECOMMUNICATIONS FRONTIER 995 MT DECHANTAL ROAD WHEELING, WV 26003 (304) 234-6392 KEITH WESTLAKE (304) 559-9020	TELECOMMUNICATIONS: COMCAST CABLE COMMUNICATIONS INC. RICHARD KOPANIC (412) 327-3122	



LOCATION MAP
300' 0' 300'
SCALE: 1" = 300'

OWNER
WATER POLLUTION CONTROL DIVISION 2516 MAIN STREET WHEELING, WV 26003 PHONE: (304) 234-3874 CONTACT: ANDY HARRIS EMAIL: AHARRIS@WHEELINGWV.GOV

ENGINEER
CT CONSULTANTS 2001 MAIN STREET, SUITE 202 WHEELING, WV 26003 PHONE: (614)-779-0051 CONTACT: DAN BARR EMAIL: DBARR@CTCONSULTANTS.COM

CONSTRUCTION PLAN APPROVALS:
[Signature] 3-28-2024
ROBERT HERRON, CITY MANAGER DATE
APPROVAL OF THESE PLANS DOES NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. THE REVIEWER DOES NOT ACCEPT RESPONSIBILITY FOR THE INTEGRITY OF THE PLANS.

DESIGN ENGINEER:
[Signature]
DAN BARR, WV P.E. NO. 254451
3/28/2024
DATE

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DATE	REVISION	NO	ISSUED FOR:	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
			REVIEW	3/21/2024	AS SHOWN	DAB	LAS	DAB

**WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT SYSTEM IMPROVEMENTS
VALLEYVIEW STORM IMPROVEMENTS**

TITLE SHEET

PROJECT NO.	220991 5B
DISCIPLINE	CIVIL
SHEET NAME	TS
SHEET	1
OF	11

GENERAL

- 1. ALL ITEMS FOR THIS PROJECT SHALL CONFORM TO THE 2023 EDITION OF THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS (WV DOH) STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES SHALL GOVERN THIS IMPROVEMENT, EXCEPT WHERE NOTED. ALL REFERENCES TO SECTION NUMBERS IN THE FOLLOWING ITEMS REFER TO THE AFOREMENTIONED STANDARD SPECIFICATIONS.
2. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS NECESSARY TO COORDINATE FULL-TIME INSPECTION SERVICE FOR THE PROPOSED WORK.
3. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ENGINEER AT LEAST SEVEN (7) DAYS PRIOR TO ANY CONSTRUCTION.
4. TWENTY-FOUR (24) HOUR ADVANCE NOTIFICATION IS REQUIRED FOR ALL WORK REQUIRING INSPECTION, TESTING, OR APPROVAL BY THE ENGINEER.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND VERIFY THE EXTENT OF THE WORK TO BE PERFORMED PRIOR TO MAKING HIS BID, INCLUDING BUT NOT LIMITED TO THE REMOVAL OF ANY AND ALL ITEMS.
6. THE CONTRACTOR AND SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR AND SUBCONTRACTOR SHALL ALSO ABIDE BY ALL CITY ORDINANCES AND STATE/FEDERAL LAWS. THE CONTRACTORS AND ALL SUBCONTRACTORS SHALL SUBMIT THEIR SAFETY PLANS PRIOR TO CONSTRUCTION. A COMPLETE SET OF PLANS, SPECIFICATIONS AND SAFETY PLAN MUST BE ON THE JOB SITE AT ALL TIMES AND AVAILABLE FOR VIEWING.
7. IF THE CONTRACTOR ENCOUNTERS CONTAMINATED SOILS OR NOXIOUS FUMES, OPERATIONS SHOULD BE CEASED IMMEDIATELY.

EXISTING UTILITIES

- 8. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL CLEARANCES EXIST PER THE APPROVED PLANS. THE CONTRACTOR SHALL CALL, TOLL FREE, THE WEST VIRGINIA 811OR 1-800-245-4848 (WEB SITE WWW.WV811.COM) FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO WORK IN THE VICINITY OF THEIR UNDERGROUND LINES.
9. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON THE RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CITY AND/OR ENGINEER OF RECORD (EOR) ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THE LOCATIONS OR DEPTHS OF THE UNDERGROUND FACILITIES AS SHOWN ON THE PLANS. CONTRACTOR MUST GIVE ADEQUATE NOTICE TO THE APPROPRIATE UTILITY COMPANY BEFORE ANY EXCAVATION NEAR A KNOWN UTILITY PER STATE LAW. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS.
10. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ANY UTILITIES AS REQUIRED BY THE PLAN WITH THE OWNER OF THE AFFECTED UTILITY.
11. THE CONTRACTOR SHALL LOCATE (MARK) ALL EX. UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE EXCAVATION/INSTALLATION OF THE PROPOSED SEWER
12. WHERE POTENTIAL CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO UNCOVER SUCH UTILITIES SUFFICIENTLY IN ADVANCE OF LAYING PIPE OR DUCT FOR THE EOR TO DETERMINE THE EXACT ELEVATION AND MAKE ANY NECESSARY ADJUSTMENTS. COST OF THE ABOVE SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS IN THE CONTRACT.
13. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY AND ALL EXISTING WORK DAMAGED DURING OR DUE TO THE EXECUTION OF THIS CONTRACT TO EQUAL OR BETTER CONDITION PRIOR TO THE DAMAGE, AT THE CONTRACTOR'S OWN EXPENSE. ALL SAID WORK TO BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER. ANY DAMAGE TO OTHER UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE APPROPRIATE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.
14. ANY EXISTING UTILITY (GAS, ELECTRIC, CABLE TELEVISION, TELEPHONE, WATER LINE, STORM OR SANITARY APPURTENANCE, ETC.) IN OR OUTSIDE THE CONSTRUCTION LIMITS DAMAGED DURING THE CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE UTILITY.
15. TEMPORARY RELOCATION OF ELECTRICAL UTILITIES, INCLUDING RESTRAINT OF POLES, RELOCATION OF POLES, AND RUBBER COVERING OF ENERGIZED CONDUCTORS MAY BE REQUIRED. THE COORDINATION AND COST OF THESE SERVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MA RESTRIN POLES IF THE METHOD OF SUPPORT HAS BEEN SUBMITTED TO AND APPROVED BY THE UTILITY COMPANY.
16. THE UTILITY WILL ONLY LOCATE AND MARK MAIN LINE SEWERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATIONS ALL SERVICE LATERALS WHETHER SHOWN ON PLANS OR NOT.

EXISTING CONDITIONS

- 17. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS AND STAKES AND IN CASE OF WILLFUL OR CARELESS DESTRUCTION, HE SHALL BE CHARGED WITH THE RESULTING EXPENSE OF REPLACEMENT AND SHALL BE RESPONSIBLE FOR ANY MISTAKES THAT MAY BE CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE. ANY EXISTING PROPERTY CORNER PINS OR MONUMENTS DAMAGED OR DESTROYED BY CONSTRUCTION SHALL BE RESET BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE UPON COMPLETION OF THE PROJECT PRIOR TO FINAL PAYMENT. A CERTIFICATION SHALL BE FURNISHED BY A WV REGISTERED SURVEYOR, STATING THAT SAID DAMAGES HAVE BEEN RESTORED. THE CONTRACTOR SHALL PROVIDE SITE EROSION CONTROL TO PREVENT RUNOFF WATER FROM THE SITE FROM CARRYING SAND, SILT, DIRT, ETC. ONTO PRIVATE PROPERTY, OR INTO ANY STORM SEWER OR DRAINAGE CHANNEL. EROSION CONTROL SHALL CONFORM WITH THE REQUIREMENTS OF SPECIFICATIONS AND DRAWINGS.
18. CARE SHALL BE EXERCISED WHEN WORKING THE AREA AROUND EXISTING TREES AND SHRUBS. ANY TREES OR SHRUBS NOT MARKED FOR REMOVAL THAT ARE DAMAGED BY THE CONTRACTOR WILL HAVE TO BE REPLACED BY THE CONTRACTOR, AT HIS EXPENSE AND TO THE SATISFACTION OF THE OWNER.
19. THE CONTRACTOR SHALL PROVIDE PROPER TRENCHING SUPPORT AT ALL TIMES. ANY DAMAGE TO ADJACENT STRUCTURES, PAVEMENT, SIDEWALKS, OR UTILITIES SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. ALL SAID WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER.
20. EXISTING SANITARY FLOWS SHALL BE MAINTAINED AND PROPERLY BYPASSED ACCORDING TO PROJECT SPECIFICATIONS.

DISPOSAL OF MATERIALS

- 21. THE CONTRACTOR IS RESPONSIBLE FOR PROPER DISPOSAL OF ALL CONSTRUCTION DEBRIS INCLUDING BUT NOT LIMITED TO EXCESS SOIL, ROCK, OR ANY OTHER TYPE MATERIALS. THE CONTRACTOR SHALL NOT FILL ANY WETLANDS, LOW LANDS, FLOOD PLAINS, OR DRAINAGE WAYS WITH SAID DEBRIS WITHOUT OBTAINING PROPER APPROVALS, PERMITS, LICENSES, ETC. FROM LOCAL, STATE, OR FEDERAL AGENCIES.
22. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF MATERIALS TAKEN FROM EXCAVATIONS.
23. THE OPEN BURNING OF SITE CLEARING DEBRIS, TRASH, ETC. IS PROHIBITED IN THE CITY.

RESTORATION

- 24. ALL MAIL BOXES AND TRAFFIC CONTROL SIGNS ENCOUNTERED DURING CONSTRUCTION SHALL BE REPLACED IMMEDIATELY AFTER THE SEWER HAS BEEN INSTALLED AND BACKFILLED. PROVIDE TEMPORARY MAIL BOXES FOR DISRUPTIONS GREATER THAN 24 HOURS.
25. RESTORATION IN MOST CASES SHALL BE PERFORMED ACCORDING TO THE CITY OF WHEELING TRENCH DETAILS AS SHOWN ON THE DETAIL SHEET. ANY EXCEPTIONS TO THIS RESTORATION METHOD ARE PRESENTED IN THE PLAN SHEETS ON A CASE BY CASE BASIS.

ADDITIONAL CLARIFYING NOTES

- 26. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH PROPERTY OWNERS.

TREE CLEARING

- 27. ITEM SHALL CONFORM TO SECTION 201 OF THE WVDOT SPECIFICATION MANUAL. ITEM SHALL BE PAID ON A SQUARE FOOT (SF) BASIS.
28. NO CLEARING SHALL TAKE PLACE OUTSIDE OF THE DESIGNATED WORK LIMITS.
29. TREE CLEARING SHALL BE BASED ON QUANTITY SHOWN ON THE BID FORM. AFTER THE PROJECTS IS AWARDED, A SELECTIVE TREE CLEARING WALKTHROUGH SHALL BE SCHEDULED WITH THE CONTRACTOR, ENGINEER, AND OWNER, AND SPECIFIC TREES WILL BE MARKED FOR CLEARING. ONLY THOSE TREES THAT ARE MARKED FOR CLEARING SHALL BE CUT DOWN. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT OR PAYMENT FOR TREES THAT ARE CUT THAT WERE NOT MARKED AS PART OF THE SELECTIVE TREE CLEARING WALK THROUGH, AT A PRICE DETERMINED BY THE OWNER AND THE ENGINEER.

CONSTRUCTION LAYOUT STAKES

- 30. ITEM SHALL CONFORM TO SECTION 639 OF THE WVDOT SPECIFICATION MANUAL. ITEM SHALL BE PAID ON A LUMP SUM (LS) BASIS.

PAVEMENT/SIDEWALK SECTION

- 35. ITEM 408002 TACK COAT SHALL CONFORM TO SECTION 408 OF THE WVDOT SPECIFICATION MANUAL. THE UNIT OF MEASURE SHALL BE GALLONS
36. ITEM 415005 2" MILLING SHALL CONFORM TO SECTION 415 OF THE WVDOT SPECIFICATION MANUAL. AFTER MILLING OCCURS THE AREA SHALL BE FILLED WITH 2" TYPE 4 MARSHALL ASPHALT SKID RESISTANT COURSE AS SHOWN ON THE LIMITS OF WORK ON THE PLANS. THE UNIT OF MEASURE SHALL BE SQUARE YARDS (SY).
37. ITEM 501001- 8" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT. THE CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, MATERIAL AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL THIS ITEM TO CONFORM TO SECTION 501 OF THE WVDOT SPECIFICATIONS MANUAL. THIS ITEM SHALL INCLUDE SAW CUTTING PAVEMENT FULL DEPTH PRIOR TO EXCAVATION. THE PAY LIMIT WIDTH OF REPLACEMENT IS ESTABLISHED IN THE STANDARD DETAIL DRAWING FOR THE VARIOUS SIZE PIPES. MAXIMUM WIDTH IS PAVED AREA DISTURBED. THE UNIT OF MEASURE SHALL BE SQUARE YARDS (SY) INSTALLED AS SHOWN ON THE STANDARD DETAIL DRAWINGS, MEASURED IN PLACE.
38. ITEM 307001- 6" CLASS 1 AGGREGATE BASE COURSE, THIS ITEM SHALL CONFORM TO SECTION 307 OF THE WVDOT SPECIFICATION MANUAL. ALL WORK, LABOR, MATERIAL, DISPOSAL, EQUIPMENT, AGGREGATE, AND EXCAVATION NECESSARY TO COMPLETE WORK SHALL BE INCLUDED IN THIS ITEM. THIS ITEM SHALL BE PAID FOR BY THE CUBIC YARD PLACED (CY).
39. ITEM 401002- 2" WEARING COURSE TYPE 4. THE CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, MATERIAL AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL WEARING COURSE. THIS ITEM SHALL INCLUDE PLACEMENT OF WEARING COURSE TYPE 4 AS SHOWN ON THE STANDARD DETAIL DRAWINGS AND PER THE CONTRACT DOCUMENTS. THE PAY LIMIT WIDTH OF REPLACEMENT IS ESTABLISHED IN THE STANDARD DETAIL DRAWING FOR THE VARIOUS SIZE PIPES. MAXIMUM WIDTH IS PAVED AREA DISTURBED. ALL WORK NECESSARY TO COMPLETE THE ITEM IN ACCORDANCE WITH THE WVDOT SPECIFICATIONS (TABLE 401.4.2A) AND THE NOTES OUTLINED IN THESE PLANS. THE UNIT OF MEASURE SHALL BE TONS (TON) INSTALLED AS SHOWN ON THE STANDARD DETAIL DRAWINGS, MEASURED IN PLACE.
40. ITEM 609001- CONCRETE SIDEWALK, THIS ITEM SHALL CONFORM TO SECTION 609 OF THE WVDOT SPECIFICATION MANUAL. ALL WORK IS TO BE PAID FOR ON A PER SQUARE YARD (SQ YD) BASIS. ALL WORK, LABOR, MATERIAL, DEMOLITION DISPOSAL, AGGREGATE, EQUIPMENT, AND EXCAVATION SHALL BE PER THE SIDEWALK DETAIL. ITEM SHALL INCLUDE ALL WORK NECESSARY TO COMPLETE THE ITEM.
41. ITEM 609002- BED COURSE MATERIAL, THIS ITEM SHALL CONFORM TO SECTION 609 OF THE WVDOT SPECIFICATION MANUAL. ALL WORK, LABOR, MATERIAL, DISPOSAL, AGGREGATE, EQUIPMENT, AND EXCAVATION NECESSARY TO COMPLETE ITEM SHALL BE INCLUDED. THIS ITEM SHALL BE PAID FOR BY CUBIC YARD (CY).
42. ITEM 609005 - CURB RAMP
THIS ITEM SHALL CONFORM TO SECTION 609 OF THE WVDOT SPECIFICATION MANUAL. ALL WORK, LABOR, MATERIAL, DISPOSAL, AGGREGATE, EQUIPMENT, AND EXCAVATION NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED. THIS ITEM SHALL BE PAID FOR ON AN EACH (EA) BASIS
43. ITEM 609006 - DETECTABLE WARNING SURFACE
THIS ITEM SHALL CONFORM TO SECTION 609 OF THE WVDOT SPECIFICATION MANUAL. ALL WORK, LABOR, MATERIAL, DISPOSAL, AGGREGATE, EQUIPMENT, AND EXCAVATION NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED. THIS ITEM SHALL BE PAID FOR ON AN EACH (EA) BASIS

MOBILIZATION

- 41. ITEM SHALL CONFORM TO SECTION 204 OF THE WVDOT SPECIFICATION MANUAL. THIS ITEM SHALL INCLUDE PERFORMANCE OF CONSTRUCTION PREPARATORY OPERATIONS, INCLUDING THE MOVEMENT OF PERSONNEL AND EQUIPMENT TO THE PROJECT SITE, PERMITS, BONDING AND INSURANCE. MAXIMUM PAYMENT FOR THIS ITEM WILL BE 50% ON FIRST PAY REQUEST AND BALANCE WILL BE PAID ON FINAL PAY REQUEST. ITEM SHALL BE PAID IN LUMP SUM (LS) BASIS.

MAINTENANCE OF TRAFFIC

- 42. ITEM SHALL CONFORM TO SECTION 636 OF WVDOT SPECIFICATION MANUAL AND DETAILS ON THE CONSTRUCTION PLAN SET. ITEM SHALL BE LUMP SUM (LS) BASIS. ANY IMPACTS TO ACCESS MUST BE COORDINATED WITH PROPERTY OWNERS A MINIMUM OF 24-HOUR IN ADVANCE. THE CONTRACTORS SHALL PROVIDE UPDATES TO THE CITY WITH TRAFFIC IMPACTS SEVEN DAYS PRIOR TO MAKING CHANGES. CHANGES TO THE MAINTENANCE OF TRAFFIC PLAN, CLOSURES, AND WEEKLY UPDATES SHALL BE SENT TO THE ENGINEER AND OWNER. TRAFFIC CONTROL SHALL BE COORDINATED WITH THE CITY OF WHEELING POLICE. PARKING CHANGES MUST BE POSTED ALONG THE STREET IMPACTED A MINIMUM OF 24-HOURS IN ADVANCE.
43. ROADWAYS SHALL ONLY BE CLOSED ONE LANE AT A TIME. PROVIDE A SIGNED PEDESTRIAN DETOUR, ROADWAY CLOSED AHEAD SIGNS, AND PEDESTRIAN BARRICADES.
44. THE CONTRACTOR SHALL COORDINATE INDIVIDUALLY WITH BUSINESS OWNERS ALONG THE ALIGNMENT TO ENSURE THAT TRUCK AND SHIFT TRAFFIC WILL NOT BE IMPEDED BY CONSTRUCTION. A SCHEDULE SHALL BE DEVELOPED THAT IS AGREED UPON BETWEEN THE BUSINESS OWNER AND CONTRACTOR.
45. TEMPORARY LIGHTING MAY BE USED IN LIEU OF FLAGMEN, IN ACCORDANCE WITH THE WVDOT MANUAL ON TEMPORARY TRAFFIC CONTROL FOR STREETS AND HIGHWAYS, 2006 EDITION, SPECIFICALLY DESCRIBED IN SECTION F.75 THROUGH F.80 OF THE MANUAL. IN ALL CASES THE MAINTENANCE OF TRAFFIC PLAN SHALL BE APPLIED AND ADHERED TO.

STORM SEWER

- 48. ITEM 604052 - PLASTIC SEWER PIPE SHALL CONFORM TO SECTION 604 AND SUBSECTION 714.19 OR 714.22 OF THE WVDOT SPECIFICATION MANUAL. ITEM SHALL BE PAID ON A LINEAR FOOT (LF) BASIS AND SHALL INCLUDE THE PIPE MATERIAL, INSTALLATION, AND SUITABLE MATERIAL TO BE REUSED FOR TRENCH PLACEMENT.
49. ITEM 605001 ALL MANHOLES SHALL BE WVDOT TYPE A MANHOLES ACCORDING TO DETAILS. THIS ITEM SHALL CONFORM TO SECTION 605 OF THE WVDOT SPECIFICATION MANUAL. ITEM SHALL BE PAID ON AN EACH (EA) BASIS AND IS TO INCLUDE ALL EQUIPMENT, MATERIAL, INSTALLATION, AND LABOR.
50. ITEM 605004 ALL INLETS SHALL BE WVDOT TYPE B INLETS ACCORDING TO DETAILS. THIS ITEM SHALL CONFORM TO SECTION 605 OF THE WVDOT SPECIFICATION MANUAL. ITEM SHALL BE PAID ON AN EACH (EA) BASIS AND IS TO INCLUDE ALL EQUIPMENT, MATERIAL, INSTALLATION, AND LABOR.
51. COST OF ALL LABOR, MATERIALS, AND EQUIPMENT TO COMPLETE TRENCH WORK TO THE SURFACE OF THE EXISTING PAVEMENT IN ACCORDANCE OF THE DETAILS IN THE PLANS SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE.
52. ALL MANHOLES LIDS SHALL BE INSTALLED FLUSH WITH GROUND
53. FOR PIPE SIZES 12"-15" THE PROPOSED STORM SEWER PIPE SHALL BE HDPE N-12 SMOOTH INTERIOR, CORRUGATED EXTERIOR PER ASTM F-2648; GASKETS PER ASTM F-477; BELL AND SPIGOT JOINTS TO ASTM D-3212; FITTINGS TO ASTM F-2306; AND INSTALLATION AND BEDDING PER ASTM D-2321. CITY OF WHEELING TO PROVIDE ALL 12" PVC PIPE. CONTRACTOR TO PICK UP FROM CITY OF WHEELING WPCD.
54. FOR PIPE SIZES 18"-30" THE PROPOSED STORM SEWER PIPE SHALL BE HDPE N-12 SMOOTH INTERIOR, CORRUGATED EXTERIOR PER ASTM F-2648; GASKETS PER ASTM F-477; BELL AND SPIGOT JOINTS TO ASTM D-3212; FITTINGS TO ASTM F-2306; AND INSTALLATION AND BEDDING PER ASTM D-2321
55. ALL MANHOLES SHALL BE CONSTRUCTED WITHOUT STEPS. MANHOLE FRAMES AND LIDS SHALL BE EAST JORDAN (NO ALTERNATIVES).
FRAME: 1450Z
MH CASTING: 1450A - MARKED "STORM" (UNLESS NOTED OTHERWISE)
INLET: WV DOH TYPE B WITH 5344M GRATE

SPECIAL ITEMS

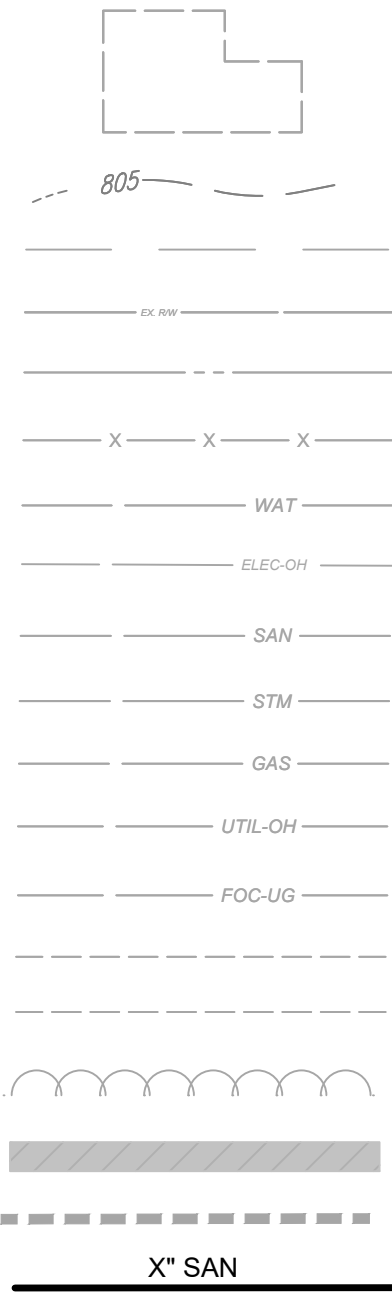
- 56. ITEM SPECIAL - HEADWALL 1 (30" PIPE)
ITEM SHALL CONFORM TO WVDOT SECTION 601 CLASS B CONCRETE. ALL WORK, LABOR, EXCAVATION AND MATERIAL INCLUDING TIDEFLEX SERIES 35-1 CHECKVALVE SHALL BE INCLUDED IN THIS ITEM. WORK SHALL BE PAID FOR ON AN EACH (EA) BASIS
57. ITEM SPECIAL - HEADWALL 2 (12" PIPE)
ITEM SHALL CONFORM TO WVDOT SECTION 601 CLASS B CONCRETE. ALL WORK, LABOR, EXCAVATION AND MATERIAL INCLUDING TIDEFLEX SERIES 35-1 CHECKVALVE SHALL BE INCLUDED IN THIS ITEM. WORK SHALL BE PAID FOR ON AN EACH (EA) BASIS
58. ITEM SPECIAL - 24IN X 12IN WYE OR INSERTA-TEE
ITEM SHALL CONFORM TO WVDOT SUBSECTION 714.19 OR 714.22. ALL WORK, LABOR, AND MATERIAL SHALL BE INCLUDED IN THIS PAY ITEM. ITEM SHALL BE PAID FOR ON AN EACH (EA) BASIS
59. ITEM SPECIAL - STONE ALLEY SURFACE
IN AREAS WITH STONE ALLEY, CITY OF WHEELING TYPE D TRENCH SHALL BE SURFACED WITH 6" NO. 467 STONE TOPPED WITH 1" ASHTO #8. ITEM SHALL BE INCLUDED IN THE UNIT COST FOR 30" SEWER PIPE (TYPE D WITH STONE SURFACE). ALL WORK, LABOR, MATERIAL, AND EQUIPMENT USED TO FACILITATE THE INSTALLATION OF STONE SHALL BE INCLUDED IN THIS PAY ITEM. INSTALLATION SHALL BE PAID FOR ON A SQUARE YARD (SY) BASIS

- 59. ITEM SPECIAL - UNSUITABLE BACKFILL CONTINGENCY
THE CONTRACTOR SHALL PROVIDE SUITABLE BACKFILL MATERIAL IN THE CASE THAT THE EXISTING MATERIAL IS UNSUITABLE FOR CONSTRUCTION. SUITABILITY FOR CONSTRUCTION SHALL BE AS DESCRIBED IN SECTIONS 207 AND 716 OF THE WVDOT SPECIFICATIONS MANUAL. HOWEVER, THE ENGINEER RESERVES THE RIGHT TO DETERMINE THE SUITABILITY OF BACKFILL MATERIAL. AN ESTIMATE FOR THE REQUIRED AMOUNT OF SUITABLE BACKFILL MATERIAL HAS BEEN INCLUDED IN THE TABLE OF ESTIMATED QUANTITIES, AND SHALL BE PAID ON A CUBIC YARD (CY) BASIS.
52. ITEM SPECIAL - BULKHEAD FOR SEWER
THE CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, MATERIALS, AND EQUIPMENT NECESSARY TO CONSTRUCT A SEWER ADJUSTMENT AS SHOWN ON THE CONSTRUCTION DRAWINGS AS DETAILS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE AT HIS OWN EXPENSE THAT OCCURS TO THE ADJACENT MANHOLE AS A RESULT OF THE BULKHEAD CONSTRUCTION. ITEM SHALL BE PAID ON AN EACH (EA) BASIS.
53. ITEM SPECIAL - SEWER FLOW CONTROL
SEWER FLOW CONTROL WORK IS TO BE PERFORMED IN ACCORDANCE WITH SPECIFICATION. ITEM SHALL BE PAID ON A LUMP SUM (LS) BASIS.
54. ITEM SPECIAL - REMOVE AND REPLACE FENCE IN KIND
ALL WORK, LABOR, MATERIAL, AND EQUIPMENT USED TO FACILITATE THE REMOVAL AND REPLACEMENT OF THE EXISTING FENCE SHALL BE INCLUDED IN THIS PAY ITEM. REMOVAL AND REPLACEMENT SHALL BE PAID ON A LINEAR FOOT (LF) BASIS
55. ITEM SPECIAL - STORM PIPE REMOVAL
ALL WORK, LABOR, MATERIAL, EQUIPMENT, AND EXCAVATION REQUIRED TO SEAL THE EXISTING CONNECTION SHALL BE INCLUDED WITH THIS PAY ITEM. STORM PIPE REMOVAL SHALL BE PAID ON A LINEAR FOOT (LF) BASIS.
56. ITEM SPECIAL - INLET REMOVED:
WORK IS TO BE PAID FOR ON AN EACH (EA) BASIS. ALL WORK, LABOR, MATERIAL, BACKFILL, EQUIPMENT, DISPOSAL AND EXCAVATION SHALL BE INCLUDED WITH THIS PAY ITEM.
57. ITEM SPECIAL - CONCRETE CURB REPLACEMENT
CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, MATERIAL, DEMOLITION, AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL REPLACEMENT OF CURBS DAMAGED AS A RESULT OF THIS PROJECT. CURB REPLACEMENT SHALL BE PER THE CONCRETE CURB DETAIL. ITEMS SHALL BE PAID ON A LINEAR FOOT (LF) BASIS
58. ITEM SPECIAL - EROSION CONTROL
THE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH EAS CONTROL SHEET AND THE WVDOT EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL WITH LAST REVISION DATE OF AUGUST 29, 2016. DAMAGE TO PROPERTY AS A RESULT OF INADEQUATE EROSION CONTROL MEASURES SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. ITEM SHALL BE PAID ON A LUMP SUM (LS) BASIS.
59. ITEM SPECIAL- SEEDING AND MULCHING (WHEELING)
THE CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, MATERIAL AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL SURFACE COVERING. THIS ITEM SHALL INCLUDE ALL NECESSARY GRADING, TOPSOIL, FERTILIZER, WATER, SEED AND MULCH TO REPLACE THE DISTURBED OR DAMAGED AREA. COMPLETE AND IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. THE ITEM SHALL INCLUDE ALL WORK NECESSARY TO COMPLETE THE ITEM IN ACCORDANCE WITH WVDOT SPECIFICATIONS AND THE NOTES OUTLINED IN THESE PLANS. THE UNIT OF MEASURE SHALL BE SQUARE YARDS (SY), COMPUTED BY MULTIPLYING THE LENGTH OF THE DISTURBED AREA AS MEASURED ALONG THE CENTERLINE OF THE PIPE, TIMES THE WIDTH OF THE DISTURBED AREA, BUT IN NO CASE SHALL THE LIMITS OF PAYMENT ON EITHER SIDE OF THE PIPE BE MORE THAN THE WORK LIMITS SHOWN ON THE DRAWINGS. DAMAGED AREAS OUTSIDE OF THE LIMITS WILL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.
60. ITEM SPECIAL - REMOVE AND REPLACE WATER METER
CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, MATERIAL, DEMOLITION, AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL REPLACEMENT OF EXISTING WATER METER. ITEMS SHALL BE PAID ON AN EACH (EA) BASIS
61. ITEM SPECIAL- DOCUMENTATION OF SITE
THE CONTRACTOR SHALL VIDEO RECORD THE PROJECT SITE PRIOR TO START OF ACTIVITIES IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE ONE COPY OF VIDEO TO ENGINEER AND OWNER IN ELECTRONIC FORM ON USB MEMORY DEVICE. ITEM SHALL BE PAID ON A LUMP SUM (LS) BASIS.

NO	ITEM	DESCRIPTION	UNIT	QUANT.
1	639001	CONSTRUCTION LAYOUT STAKES	LS	1
2	204001	MOBILIZATION	LS	1
3	636001	MAINTENANCE OF TRAFFIC	LS	1
4	408002	TACK COAT	GAL	69
5	415005	2" MILLING	SY	151
6	501001	8" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	SY	540
7	401002	2" WEARING COURSE TYPE 4	TON	77
8	307001	6" CLASS 1 AGGREGATE COURSE BASE	TON	180
9	609001	4" CONCRETE SIDEWALK	SY	58
10	609002	4" BED COURSE BASE MATERIAL	SY	58
11	609005	CURB RAMP	EA	2
12	609006	DETECTABLE WARNING SURFACE	EA	2
13	604052	30" PLASTIC SEWER PIPE (TYPE D TRENCH)	LF	483
14	604052	30" PLASTIC SEWER PIPE (TYPE A-1 TRENCH)	LF	235
15	604052	24" PLASTIC SEWER PIPE (TYPE A-1 TRENCH)	LF	257
16	604052	18" PLASTIC SEWER PIPE (TYPE A-1 TRENCH)	LF	23
17	604052	12" PLASTIC SEWER PIPE (TYPE A-1 TRENCH INSTALLATION ONLY)	LF	276
18	604052	12" PLASTIC SEWER PIPE (TYPE D TRENCH INSTALLATION ONLY)	LF	36
19	605001	MANHOLE TYPE A (48" DIAMETER BASE)	EA	1
20	605001	MANHOLE TYPE A (60" DIAMETER BASE)	EA	1
21	605001	MANHOLE TYPE A (72" DIAMETER BASE)	EA	3
22	605004	TYPE B INLET	EA	9
23	SPEC	HEADWALL 1 (30" PIPE)	EA	1
24	SPEC	HEADWALL 2 (12" PIPE)	EA	1
25	SPEC	24IN X12IN" WYE OR INSERTA-TEE	EA	1
26	SPEC	STONE ALLEY SURFACE	SY	157
27	SPEC	UNSUITABLE BACKFILL CONTINGENCY	CY	250
28	SPEC	BULKHEAD FOR SEWER	EA	4
29	SPEC	SEWER FLOW CONTROL	LS	1
30	SPEC	MARKER TAPE AND LOCATOR WIRE	LF	1310
31	SPEC	SEEDING AND MULCHING	SY	578
32	SPEC	EROSION CONTROL	LS	1
33	SPEC	TREE CLEARING AND GRUBBING	LS	1
34	SPEC	REMOVE AND REPLACE FENCE IN KIND	LF	95
35	SPEC	CONCRETE CURB REPLACEMENT	LF	143
36	SPEC	INLET REMOVED	EA	5
37	SPEC	REMOVE AND REPLACE WATER METER	EA	1
38	SPEC	DOCUMENTATION OF SITE	LS	1

LEGEND

EX. BUILDING
EX. CONTOUR
CENTER LINE
EX. RW
EX. PROPERTY LINE
EX. FENCE
EX. WAT
EX. ELECTRIC
EX. SAN
EX. STM
EX. GAS
EX. OH UTIL
EX. FIBER OPTIC
EX. DRIVEWAY
EX. EASEMENT
EX. VEGETATION
PR. MILLING
PR. TRENCH
PR. SANITARY LINE
PR. SAN. LATERAL REPLACEMENT
EXISTING SAN. LATER
EXISTING WATER VALVE
EXISTING FIRE HYDRANT
EXISTING CURB INLET
EXISTING CATCH BASIN
EXISTING GAS METER
EXISTING UTILITY POLE
EXISTING TRAFFIC CONTROL POLE
EXISTING LIGHT POLE
EXISTING GUY WIRE
EXISTING CABLE TV PEDESTAL
EXISTING SIGN
EXISTING MAILBOX
SURVEY BENCHMARK
PROPOSED SANITARY MANHOLE
TC = TOP OF CASTING
ToC = TOP OF CONCRETE



your trusted advisor
engineers
architects
planners
consultants
DATE
REVISION
NO
REVIEW
ISSUED FOR:
ISSUE DATE:
SCALE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:

PROJECT NO.
220991 5B
DISCIPLINE
CIVIL
SHEET NAME
GN1
SHEET 2 OF 11
WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT
VALLEYVIEW STORM SEWER IMPROVEMENTS
GENERAL NOTES, LEGEND, AND QUANTITIES

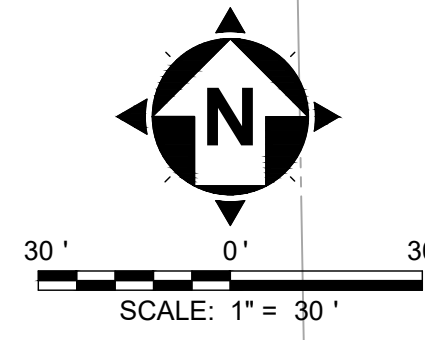
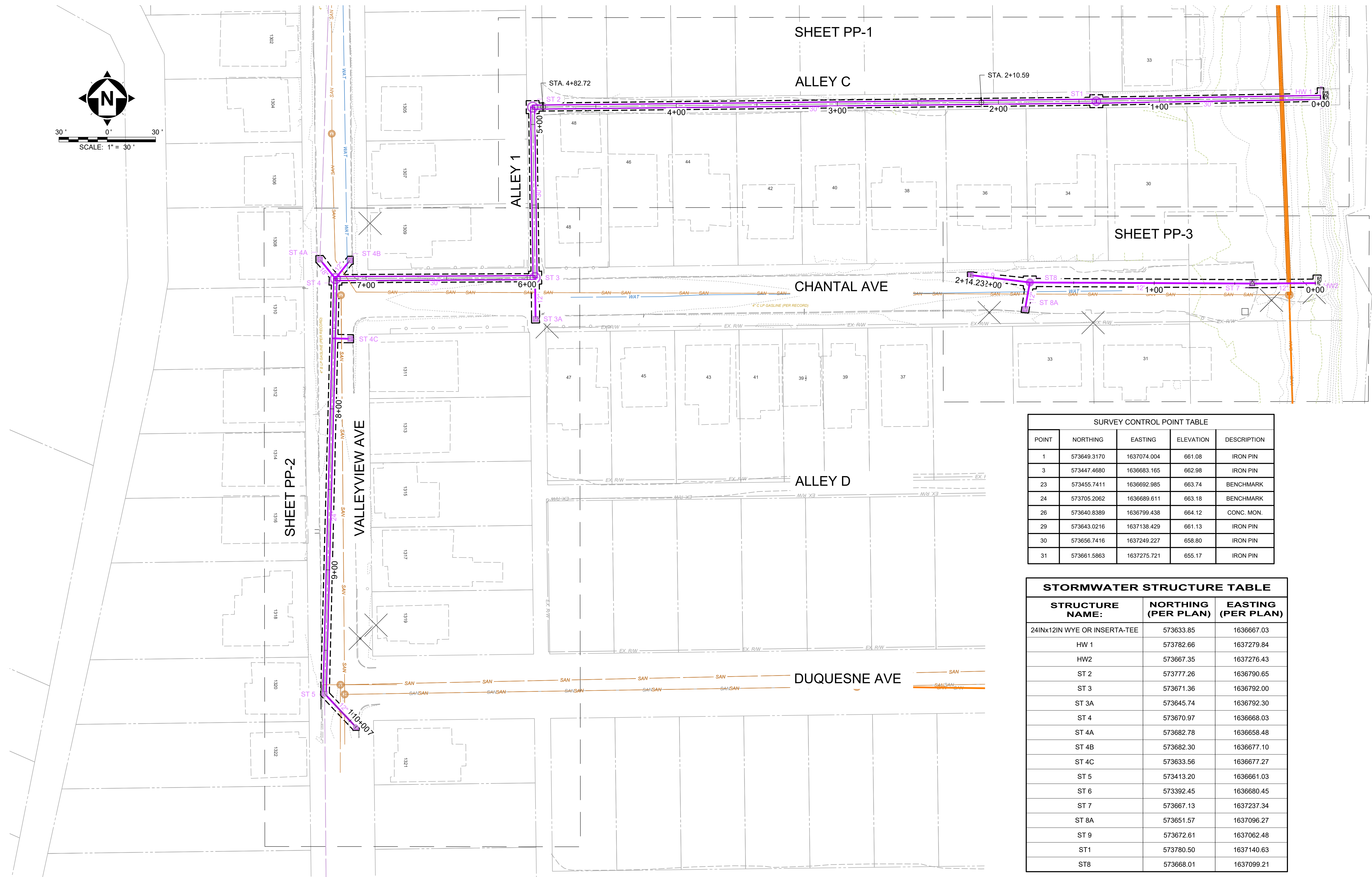
CONTRACTOR(S) SHALL CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR IS DIRECTED TO VERIFY ALL QUANTITIES PRIOR TO PREPARING AND SUBMITTING THEIR BID. ANY ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS INDICATED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR THE VARIOUS BID ITEMS.

REVISION	NO	DATE
ISSUED FOR:	REVIEW	DATE
ISSUE DATE:	NO <td>DATE</td>	DATE
SCALE:	NO <td>DATE</td>	DATE
DESIGNED BY:	NO <td>DATE</td>	DATE
DRAWN BY:	NO <td>DATE</td>	DATE
CHECKED BY:	NO <td>DATE</td>	DATE

**WATER POLLUTION CONTROL DIVISION
 WASTEWATER COLLECTION AND TREATMENT
 VALLEYVIEW STORM SEWER IMPROVEMENTS**

INDEX MAP/SURVEY CONTROL

PROJECT NO.	220991 5B
DISCIPLINE	CIVIL
SHEET NAME	INDEX
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3	11

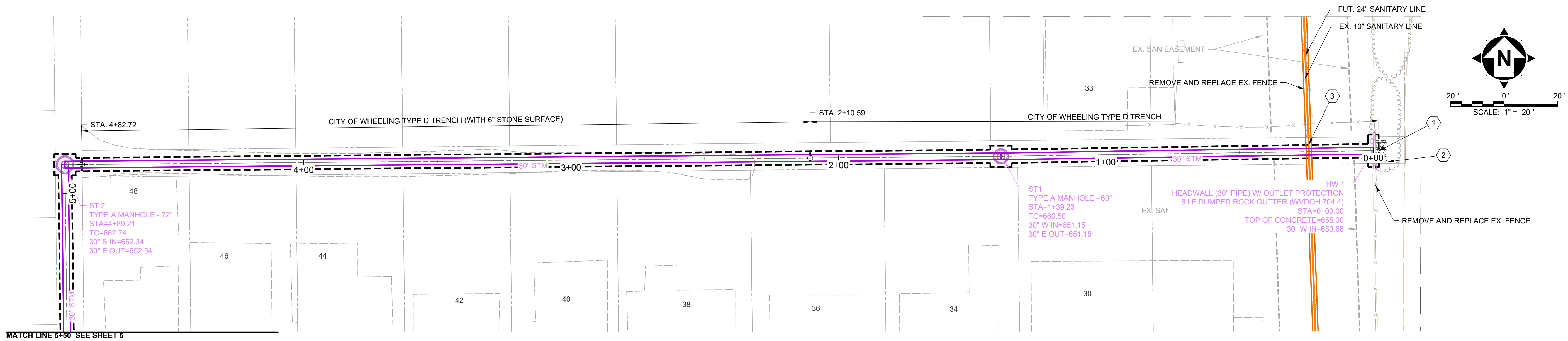


SURVEY CONTROL POINT TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	573649.3170	1637074.004	661.08	IRON PIN
3	573447.4680	1636683.165	662.98	IRON PIN
23	573455.7411	1636692.985	663.74	BENCHMARK
24	573705.2062	1636689.611	663.18	BENCHMARK
26	573640.8389	1636799.438	664.12	CONC. MON.
29	573643.0216	1637138.429	661.13	IRON PIN
30	573656.7416	1637249.227	658.80	IRON PIN
31	573661.5863	1637275.721	655.17	IRON PIN

STORMWATER STRUCTURE TABLE

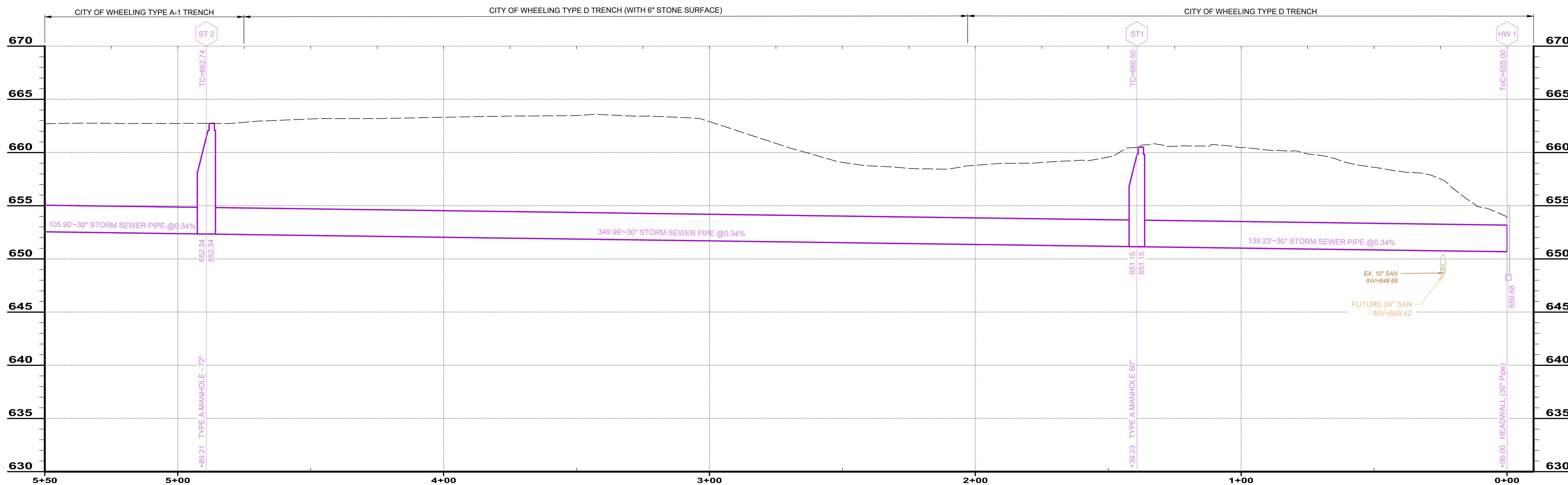
STRUCTURE NAME:	NORTHING (PER PLAN)	EASTING (PER PLAN)
24INx12IN WYE OR INSERTA-TEE	573633.85	1636667.03
HW 1	573782.66	1637279.84
HW 2	573667.35	1637276.43
ST 2	573777.26	1636790.65
ST 3	573671.36	1636792.00
ST 3A	573645.74	1636792.30
ST 4	573670.97	1636668.03
ST 4A	573682.78	1636658.48
ST 4B	573682.30	1636677.10
ST 4C	573633.56	1636677.27
ST 5	573413.20	1636661.03
ST 6	573392.45	1636680.45
ST 7	573667.13	1637237.34
ST 8A	573651.57	1637096.27
ST 9	573672.61	1637062.48
ST 1	573780.50	1637140.63
ST 8	573668.01	1637099.21



VALLEYVIEW
PLAN VIEW STA 0+00 TO 5+50

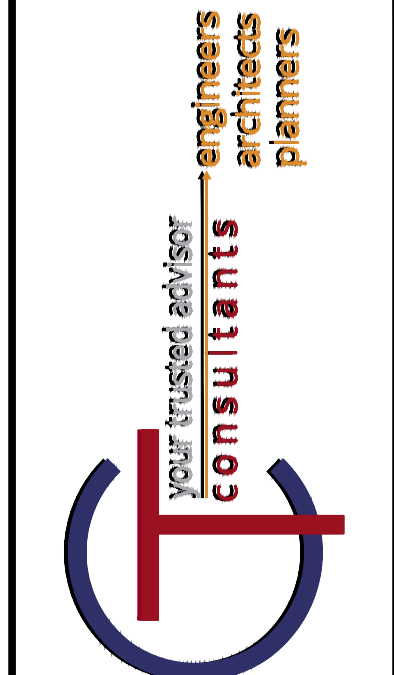
CODED NOTES

- ① PROVIDE WATERMAN SERIES F-25 MEDIUM DUTY DRAINAGE GATE. GATE SHALL HAVE A BACKPRESSURE HEIGHT RATING OF 7.94 FT (3.43 PSI). ITEM SHALL BE INCLUDED IN THE UNIT PRICE FOR HEADWALL 1 (30" PIPE)
- ② OUTLET PROTECTION SHALL CONSIST OF 4FT X 8FT X 18IN THICK 6" STONE PER SECTION 704.4 OF THE WVDOT SPECIFICATION MANUAL. ITEM SHALL BE INCLUDED IN UNIT PRICE FOR HW 1 (30" PIPE)
- ③ PROVIDE PIPE CRADLE FOR EX SANITARY CROSSING. SEE PIPE CROSSING DETAIL. ITEM TO BE INCLUDED IN COST OF VARIOUS STORM MATERIAL



PROFILE - VALLEYVIEW STORM STA 0+00 TO 5+50

STORM SEWER PROFILE
 HORZ: 1" = 20'
 VERT: 1" = 5'



NO	REVISION	DATE

ISSUED FOR:	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:

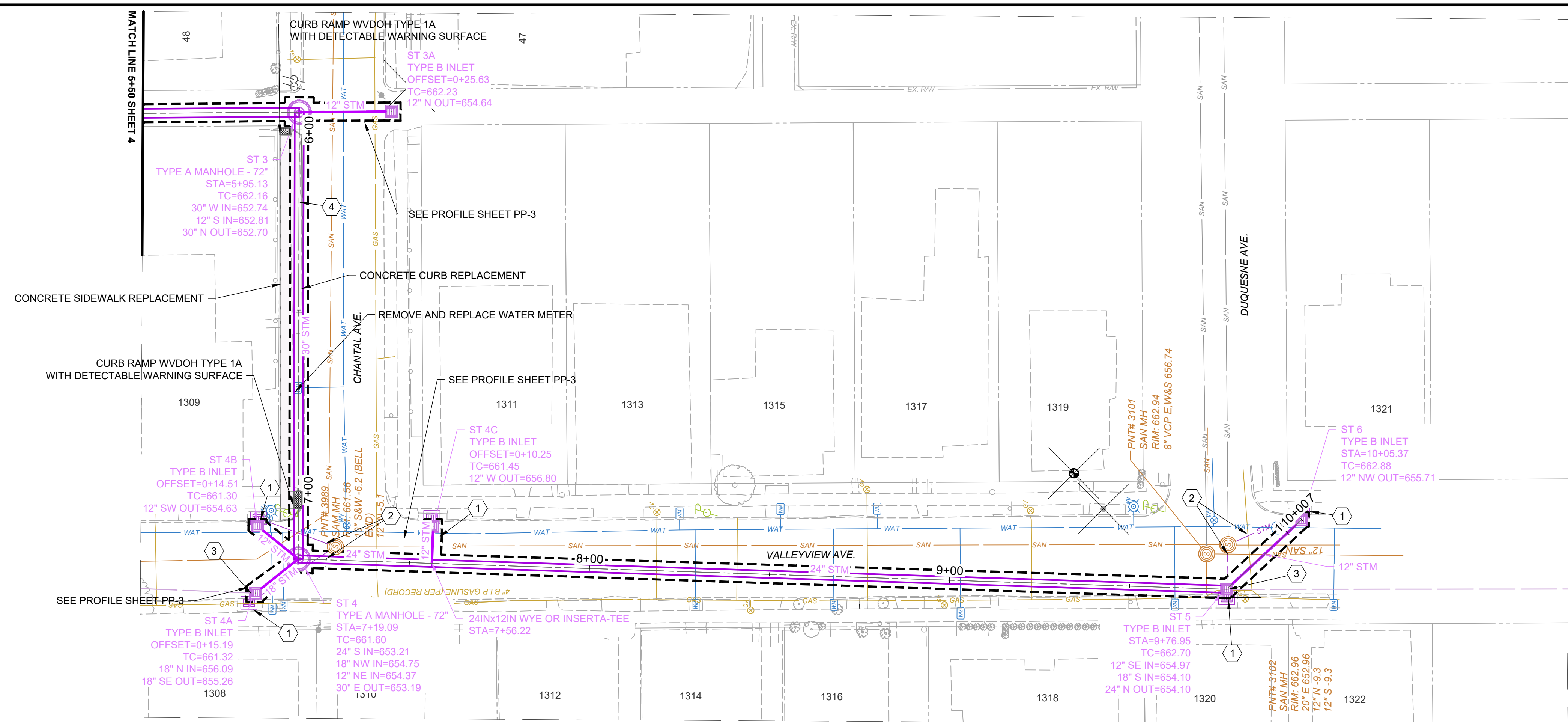
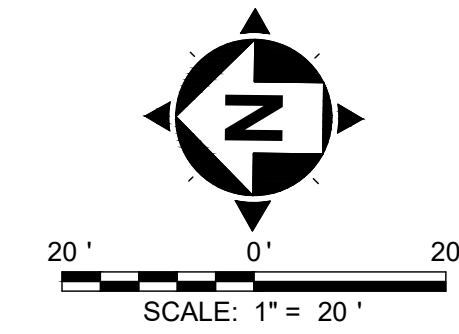
WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT
VALLEYVIEW STORM SEWER IMPROVEMENTS

SANITARY SEWER PLAN & PROFILE

PROJECT NO.	220991 5B
DISCIPLINE	CIVIL
SHEET NAME	PP-1
SHEET	OF
4	11

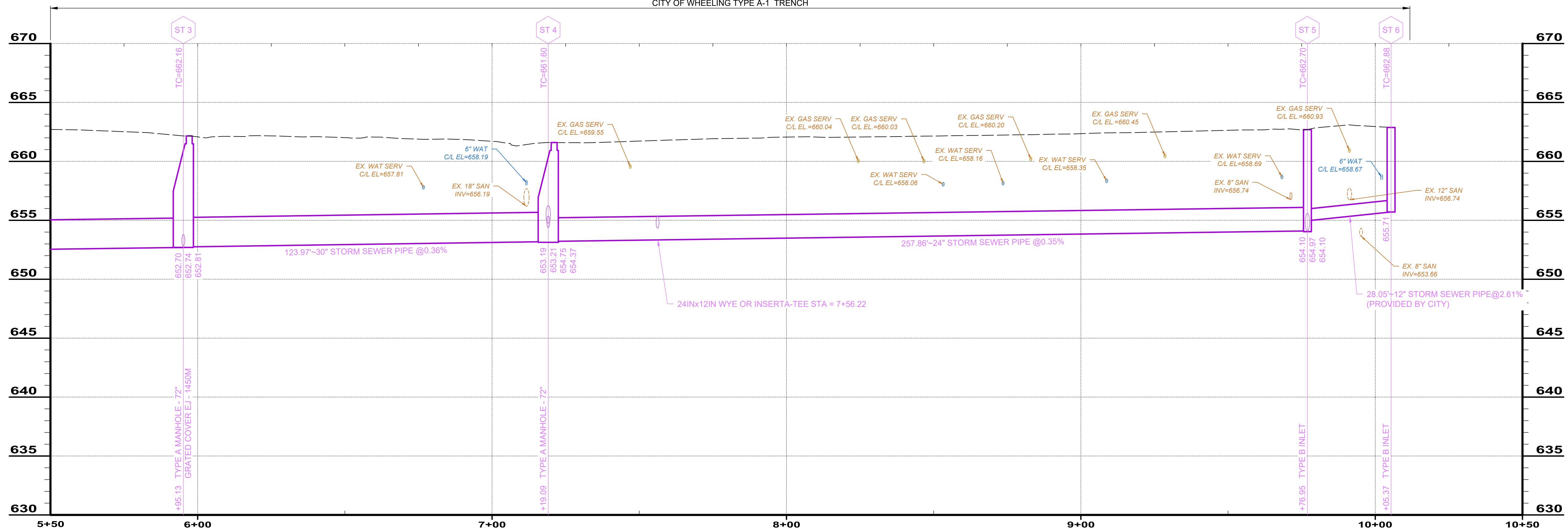
CODED NOTES

- 1 REMOVE EXISTING INLETS AND REPLACE SIDEWALK AND CURB
- 2 BULKHEAD EX. STORM PIPES
- 3 PROVIDE 4FT LONG 18IN CAPPED STUB FOR FUTURE CONNECTION AT ELEVATIONS SHOWN
- 4 GRASS STRIP REPLACEMENT TO BE INCLUDED IN PRICE FOR SEEDING AND MULCHING



**VALLEYVIEW STORM
PLAN VIEW STA 4+50 TO 9+00**

CITY OF WHEELING TYPE A-1 TRENCH



PROFILE - VALLEYVIEW STORM STA 5+50 TO 10+09.88

SANITARY SEWER PROFILE
HORZ: 1" = 20'
VERT: 1" = 5'

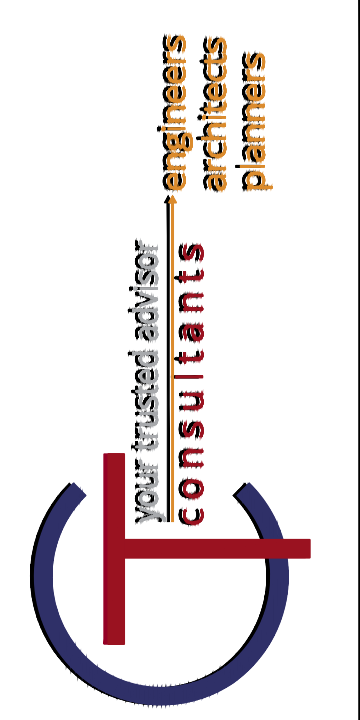
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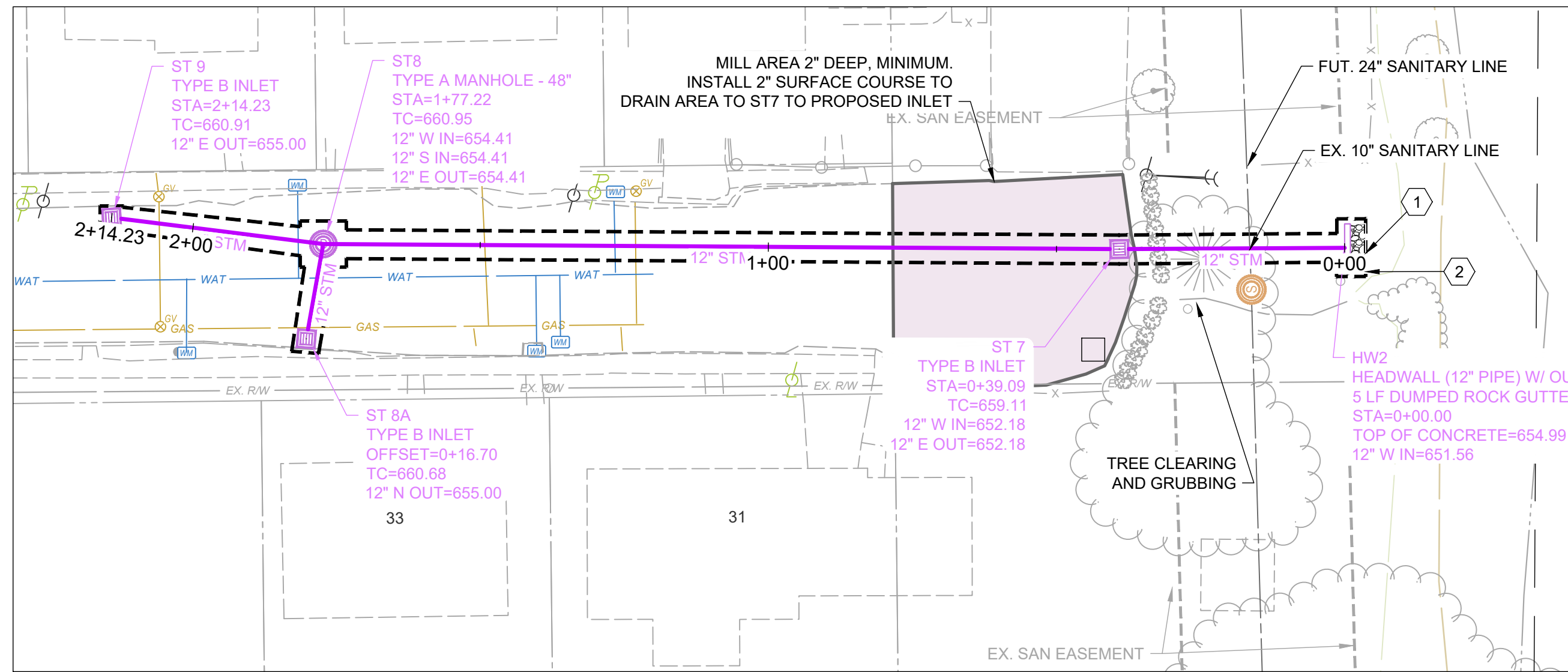
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**WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT
VALLEYVIEW STORM SEWER IMPROVEMENTS**

SANITARY SEWER PLAN & PROFILE

PROJECT NO.	220991 5B
DISCIPLINE	CIVIL
SHEET NAME	PP-2
SHEET	OF
5	11

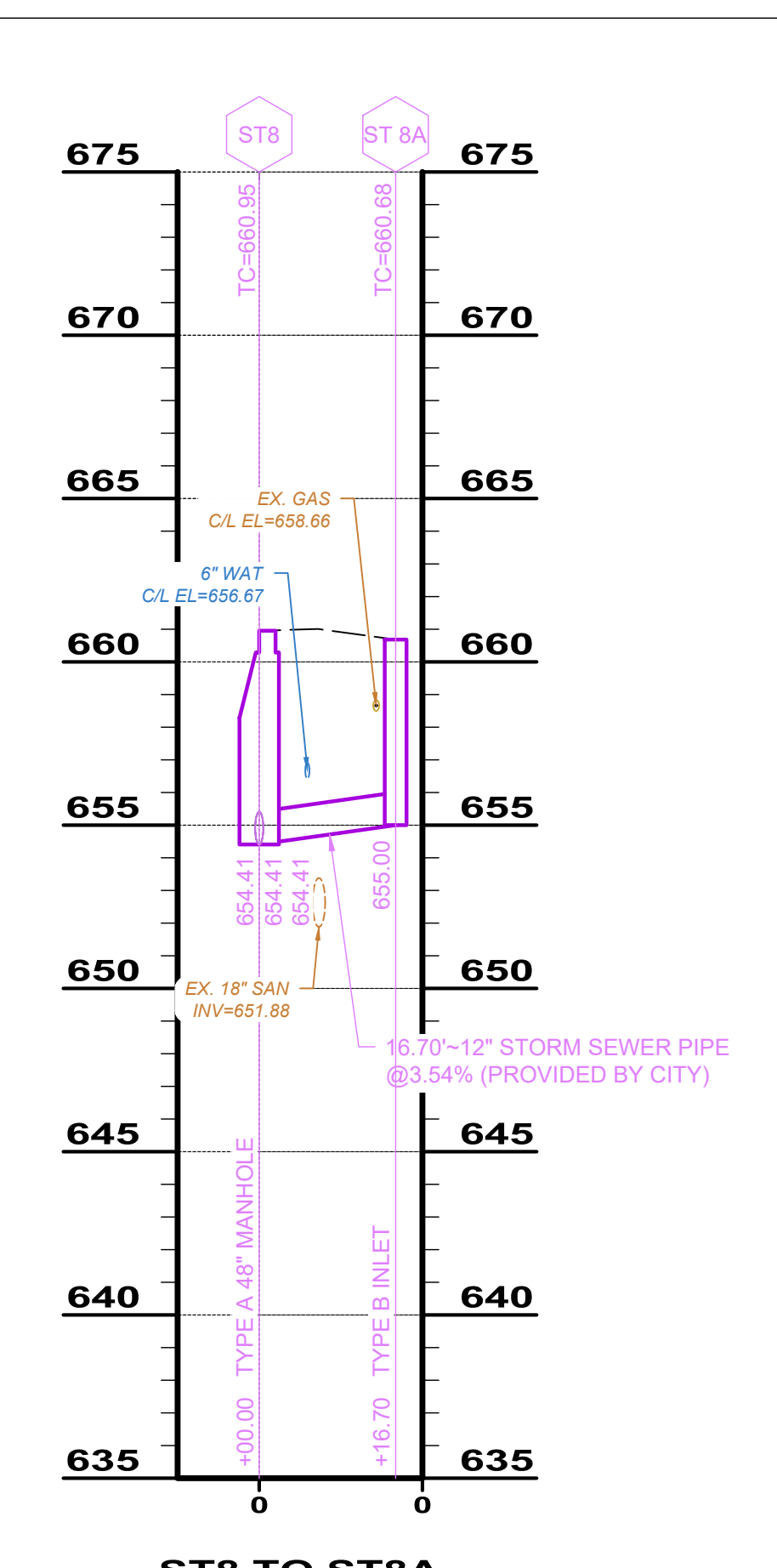
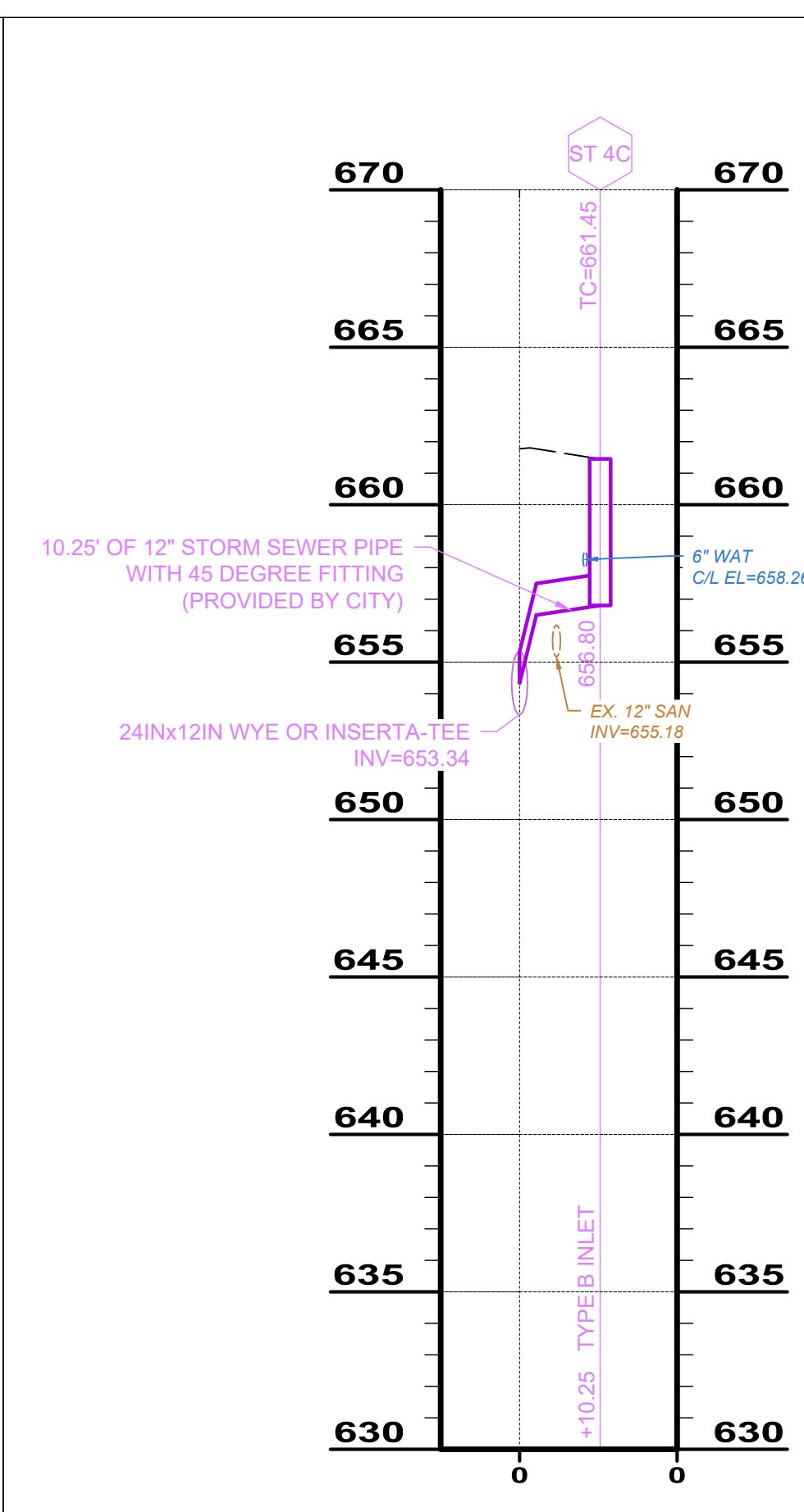
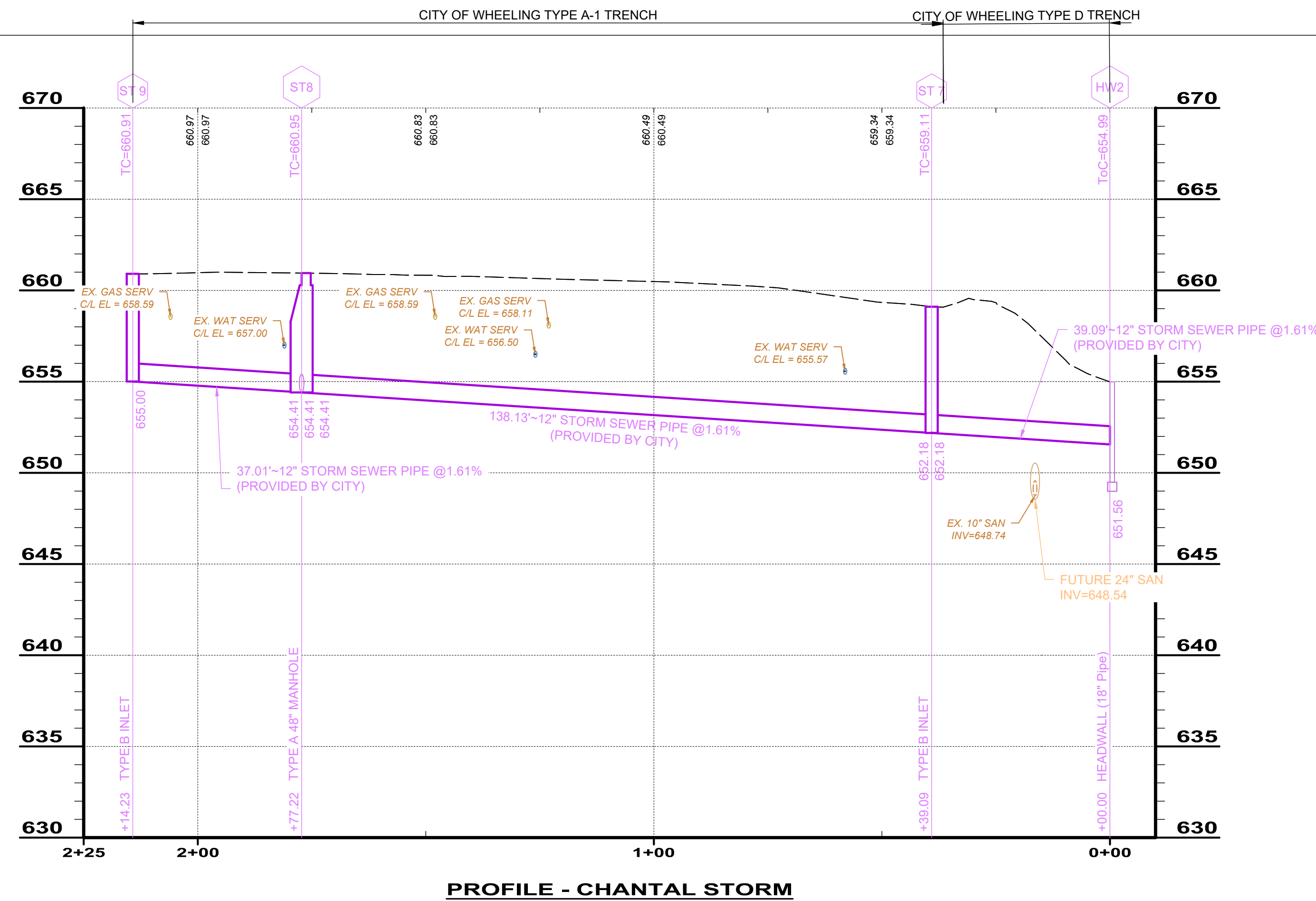
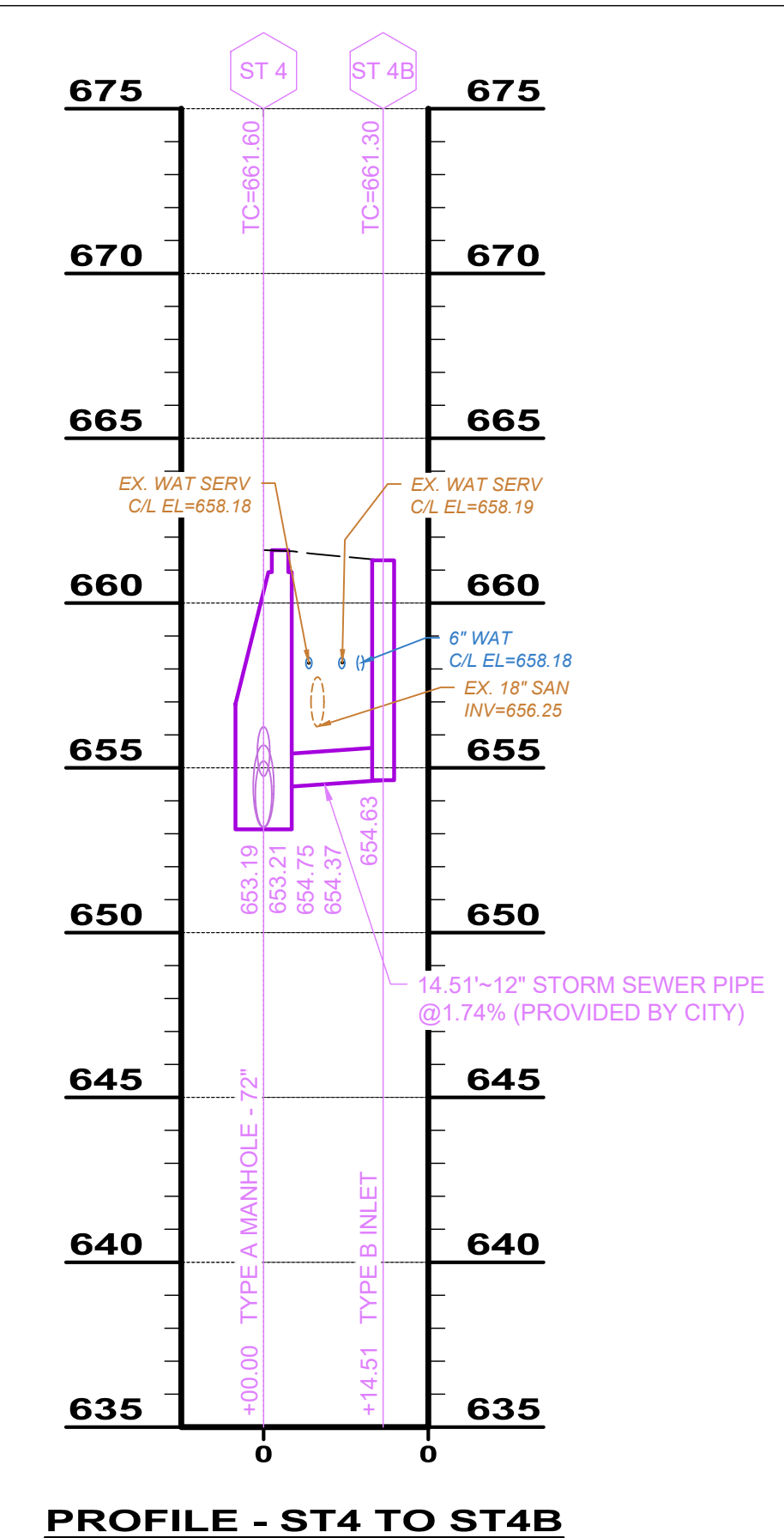
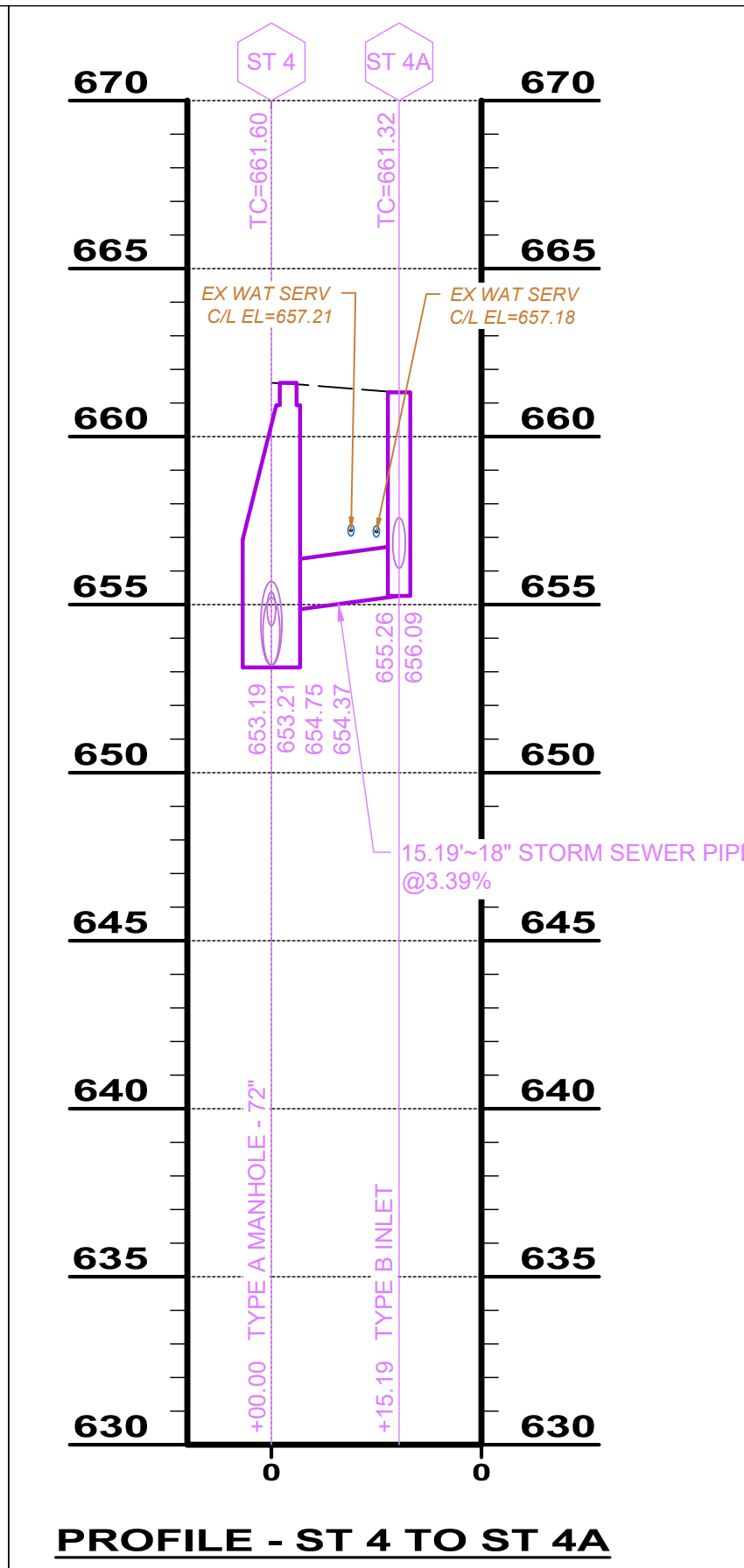
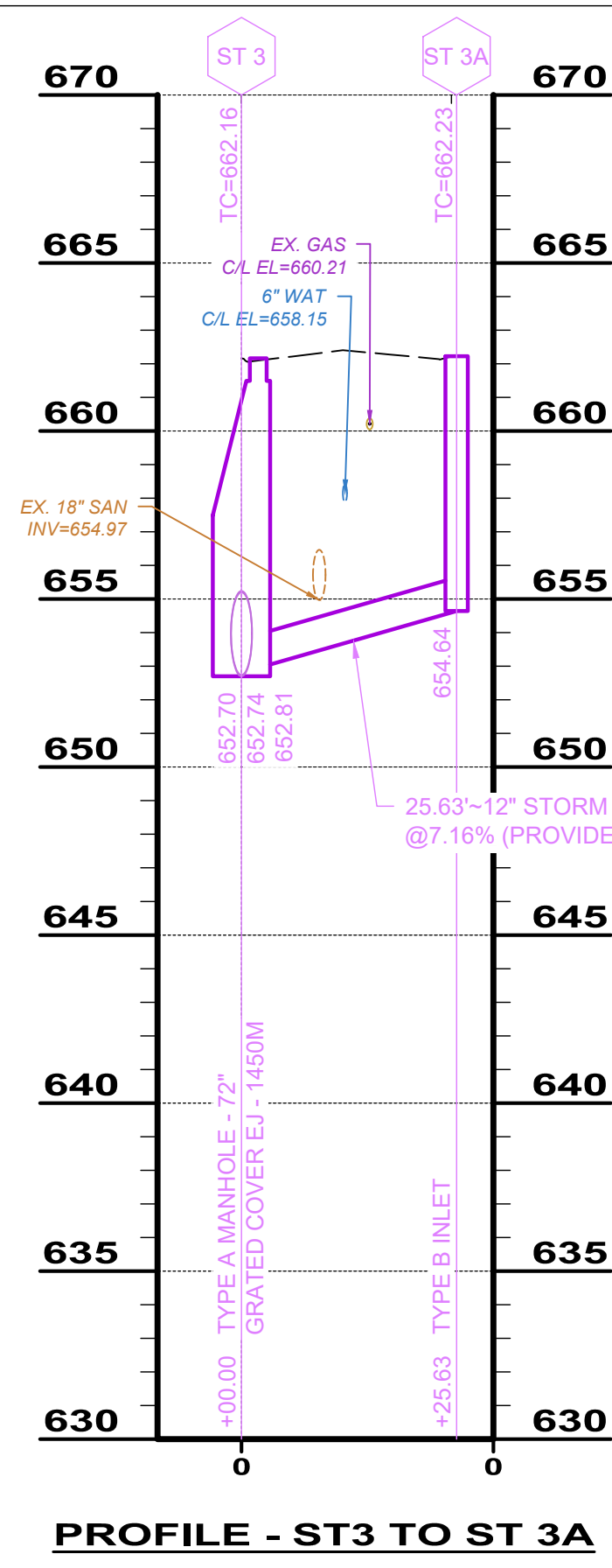
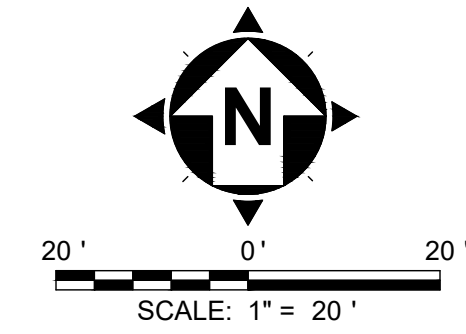




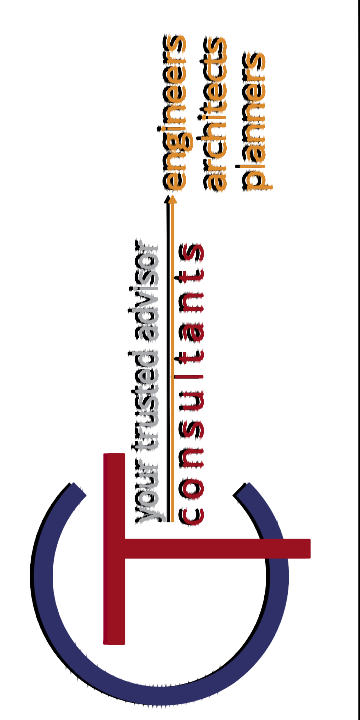
CHANTAL STORM

CODED NOTES

- 1 PROVIDE WATERMAN F-25 MEDIUM DUTY DRAINAGE GATE. GATE SHALL HAVE A BACKPRESSURE HEIGHT RATING OF 10.32 FT (4.46 PSI). ITEM SHALL BE INCLUDED IN THE UNIT PRICE FOR HEADWALL 2 (12" PIPE)
- 2 OUTLET PROTECTION SHALL CONSIST OF 4FT X 5FT X 18IN THICK 6" STONE PER SECTION 704.4 OF THE WDOH SPECIFICATION MANUAL. ITEM SHALL BE INCLUDED IN UNIT PRICE FOR HW 2 (12" PIPE)



SANITARY SEWER PROFILE
HORZ: 1" = 20'
VERT: 1" = 5'



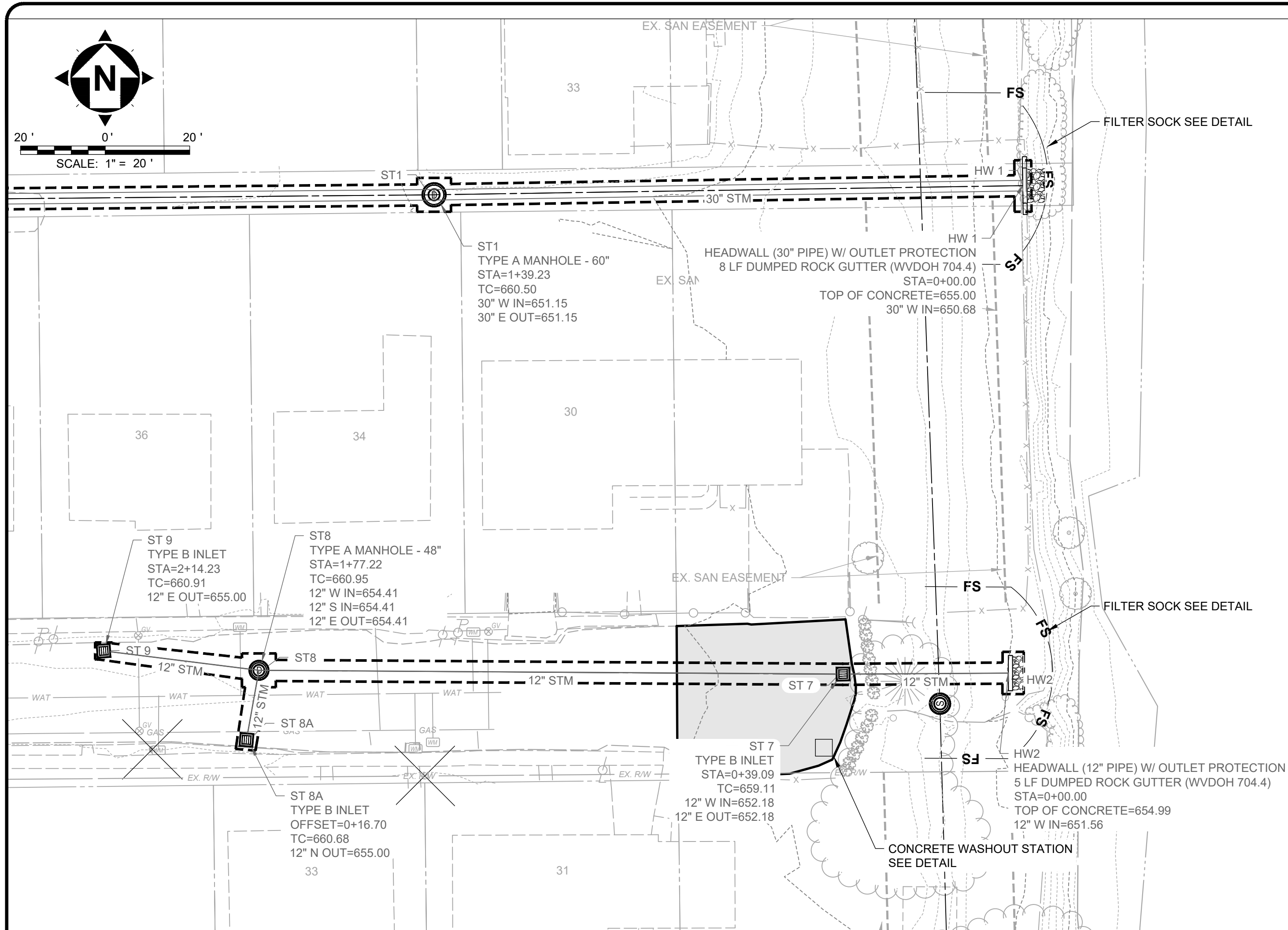
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ISSUE DATE:	3/21/2024
SCALE:	AS SHOWN
DESIGNED BY:	
DRAWN BY:	
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PROJECT NO.	
220991 5B	
DISCIPLINE	
CIVIL	
SHEET NAME	
PP-3	
SHEET	OF
6	11

WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT
VALLEYVIEW STORM SEWER IMPROVEMENTS

SANITARY SEWER PLAN & PROFILE



1. TEMPORARY SEEDING SHALL BE PLACED WHEN AREA OF DISTURBANCE IS EXPECTED TO BE DORMANT FOR MORE THAN 21 DAYS, PER THE WV E&S MANUAL

2. THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.

3. SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH VEGETATION. PERFORM SOIL TESTS TO PREDICT THE NEED FOR LIME OR FERTILIZER. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS

4. APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING, AND LIGHTLY TAMPING INTO PLACE.

5. MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING.

6. INSPECT FOR SOIL EROSION OR VEGETATION LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED AND RE-MULCH AS NEEDED.

TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 - AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
AUGUST 16 - OCTOBER 31	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
	RYE	3	112
NOVEMBER 1 - FEBRUARY 28	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	ONLY MULCH OR DORMANT SEEDING.		

TEMPORARY SEEDING NOTES

1. SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.

2. THE SEED BED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".

3. APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED BETWEEN MARCH 1 AND MAY 31 OR AUGUST 1 AND SEPTEMBER 30. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. SEEDING SHOULD NOT BE APPLIED BETWEEN OCTOBER 1 AND NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. IF SEEDING MUST OCCUR, INCREASE THE SEEDING RATE BY 50% AND ANCHOR. APPLY ADDITIONAL MULCH AND IRRIGATION AS REQUIRED TO ENSURE GERMINATION.

4. MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING.

5. SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS.

6. SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF SEEDING. DURING THIS PERIOD INSPECT FOR SOIL EROSION OR VEGETATION LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED AND RE-MULCH AS NEEDED.

7. ADEQUATE PERMANENT VEGETATION SHALL BE GROUND COVER DENSE ENOUGH TO COVER 80% OF THE SOIL SURFACE BASED ON VISUAL INSPECTION.

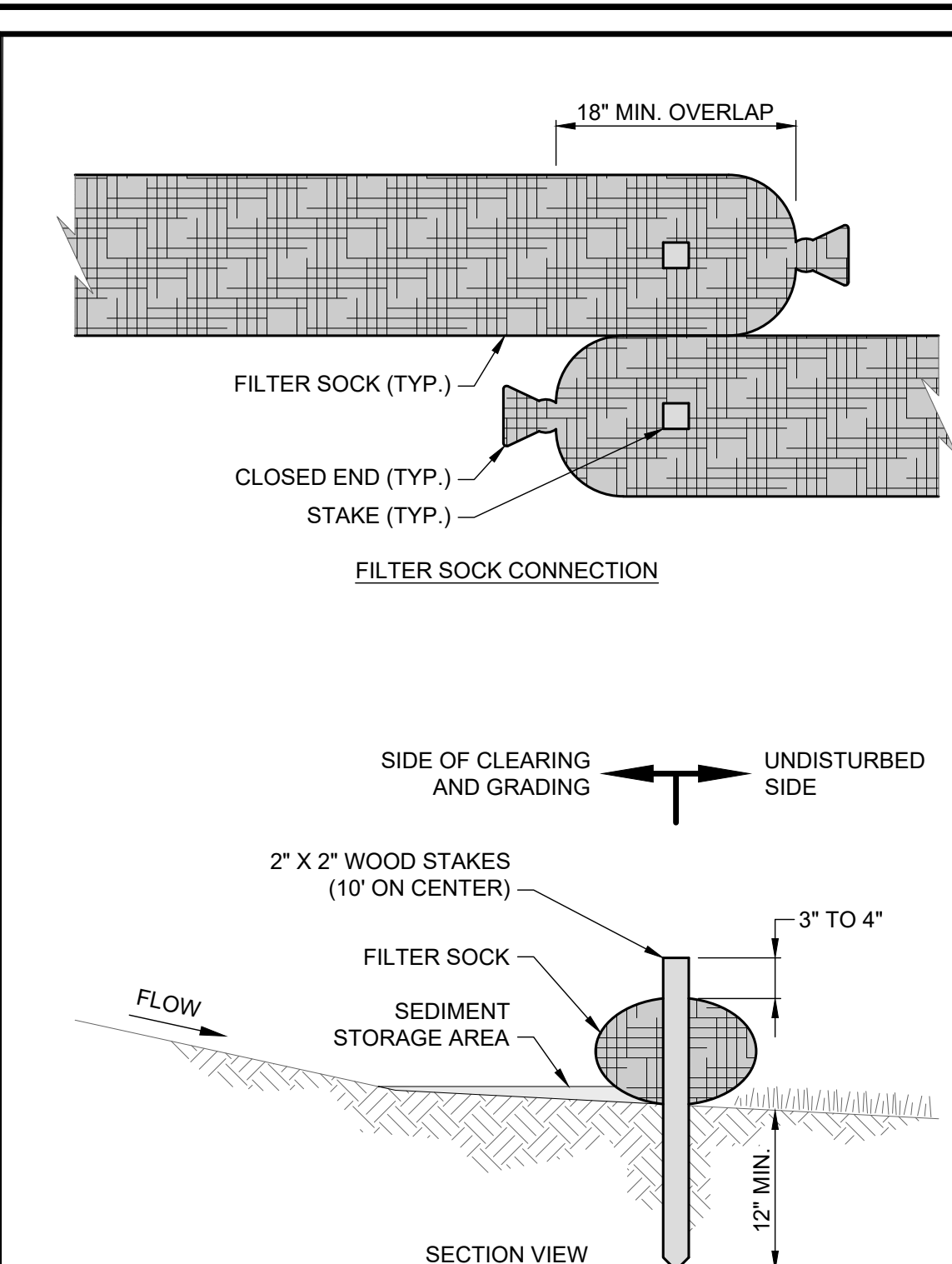
PERMANENT SEEDING NOTES

PERMANENT SEEDING FERTILIZATION AND MOWING CHART

MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREeping RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	>3"
TALL FESCUE	10-10-10	500		>4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION

SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREeping RED FESCUE	20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH <2.0 FT./SEC. VELOCITY
DOMESTIC RYEGRASS	10 - 20	
KENTUCKY BLUEGRASS	20 - 40	
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH	10 - 20	DO NOT SEED LATER THAN AUGUST
TALL FESCUE	20 - 30	
FLAT PEA	20 - 25	DO NOT SEED LATER THAN AUGUST
TALL FESCUE	20 - 30	
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
KENTUCKY BLUEGRASS	5	
LAWN		
KENTUCKY BLUEGRASS	100 - 120	
PERENNIAL RYEGRASS	100 - 120	
KENTUCKY BLUEGRASS	100 - 120	FOR SHADED AREAS
CREeping RED FESCUE	100 - 120	

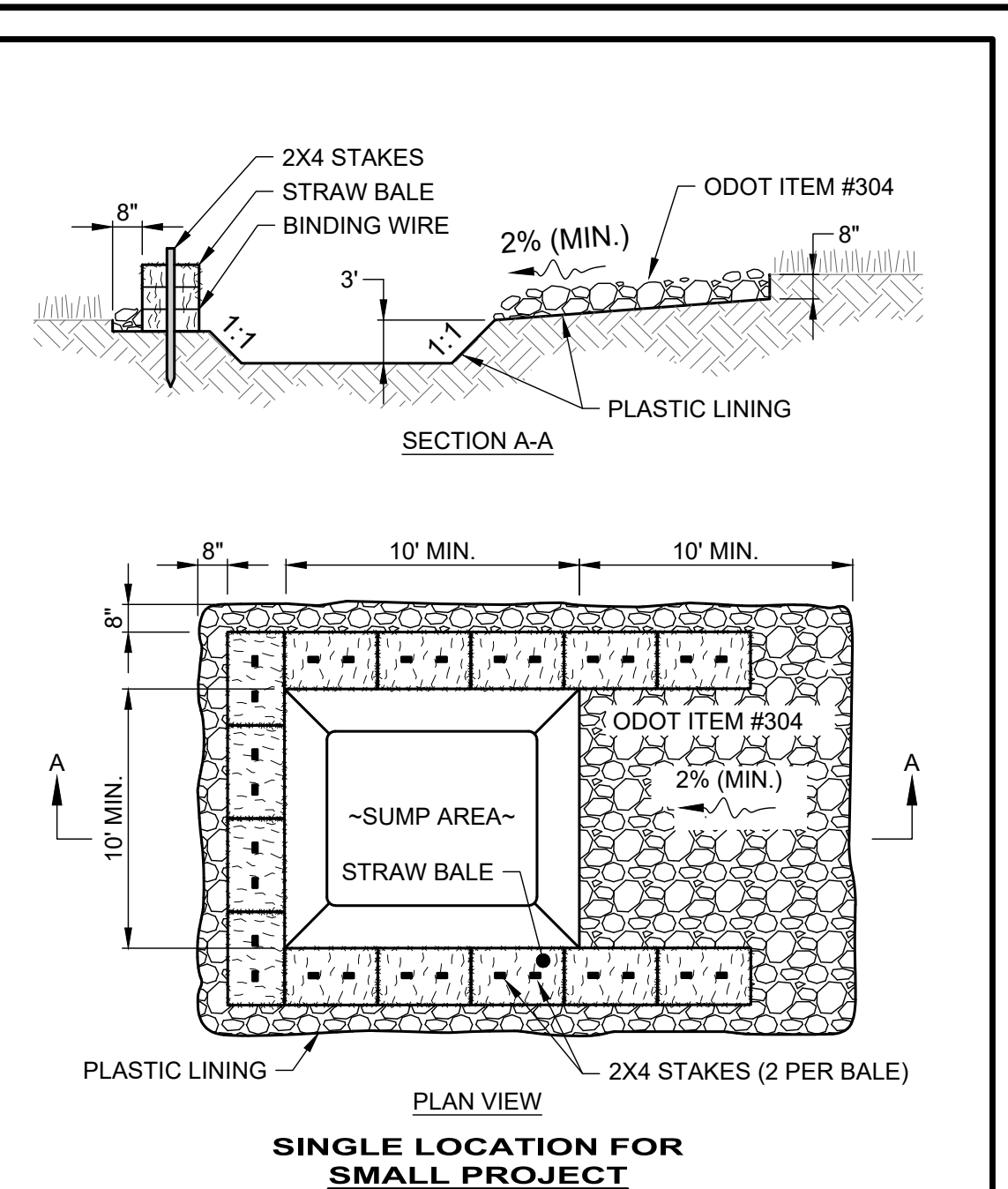


- NOTES:
- FILTER SOCKS SHALL BE CONTINUOUS, TUBULAR, HDPE KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
 - COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF REFUSE, CONTAMINANTS OR MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
 - DUE TO ENHANCED BMP'S FOR WHEELING CREEK, 18" FILTER SOCK IS REQUIRED
 - FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND MID-SLOPE.
 - THE FLAT DIMENSION OF THE SOCK SHALL BE AT LEAST 1.5 TIMES THE NOMINAL DIAMETER.
 - FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
 - TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
 - BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
 - BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 - WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
 - THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE FOLLOWING EITHER THE MANUFACTURER RECOMMENDATION OR THE GUIDANCE CHART BELOW:

MAX. SLOPE LENGTH ABOVE FILTER SOCK

SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	0 - 50:1	125'	250'	300'	350'
2% - 10%	50:1 - 10:1	100'	125'	200'	250'
10% - 20%	10:1 - 5:1	75'	100'	150'	200'
20% - 50%	5:1 - 2:1	N/A	50'	75'	100'
> 50%	> 2:1	N/A	25'	50'	75'

FILTER SOCK DETAIL
SCALE: NONE



- NOTES:
- CONCRETE WASHOUT SHALL NOT BE PLACED WITHIN 50 FEET OF A WATER WAY OR WITHIN AN AREA THAT DOESNOT IMPEDE LOCAL TRAFFIC
 - CONCRETE WASHOUT AREA SHALL BE LOCATED A MINIMUM OF 100' FROM STORM SEWER INLETS, STREAMS, WETLANDS OR ANY OTHER SURFACE WATERS.
 - IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO A CONSTRUCTION ENTRANCE.
 - CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. LARGE SITES MAY REQUIRE MULTIPLE CONCRETE WASHOUT AREAS.
 - PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-ML POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF LARGE ROCKS AND DEBRIS.
 - CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
 - CONCRETE WASHOUT AREA SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOW.
 - PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE.
 - CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR PLASTIC LINING SHALL BE REPAIRED IMMEDIATELY. REPLACE THE ENTIRE CONCRETE WASHOUT AREA WHEN IT IS 75% FULL.

CONCRETE WASHOUT DETAIL
SCALE: NONE

your trusted advisor
consultants
engineers
architects
planners

DATE	REVISION	NO	ISSUED FOR:	REVIEW	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
					3/21/2024	AS SHOWN	DAB	LAS	DAB

**WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT
VALLEYVIEW STORM SEWER IMPROVEMENTS**

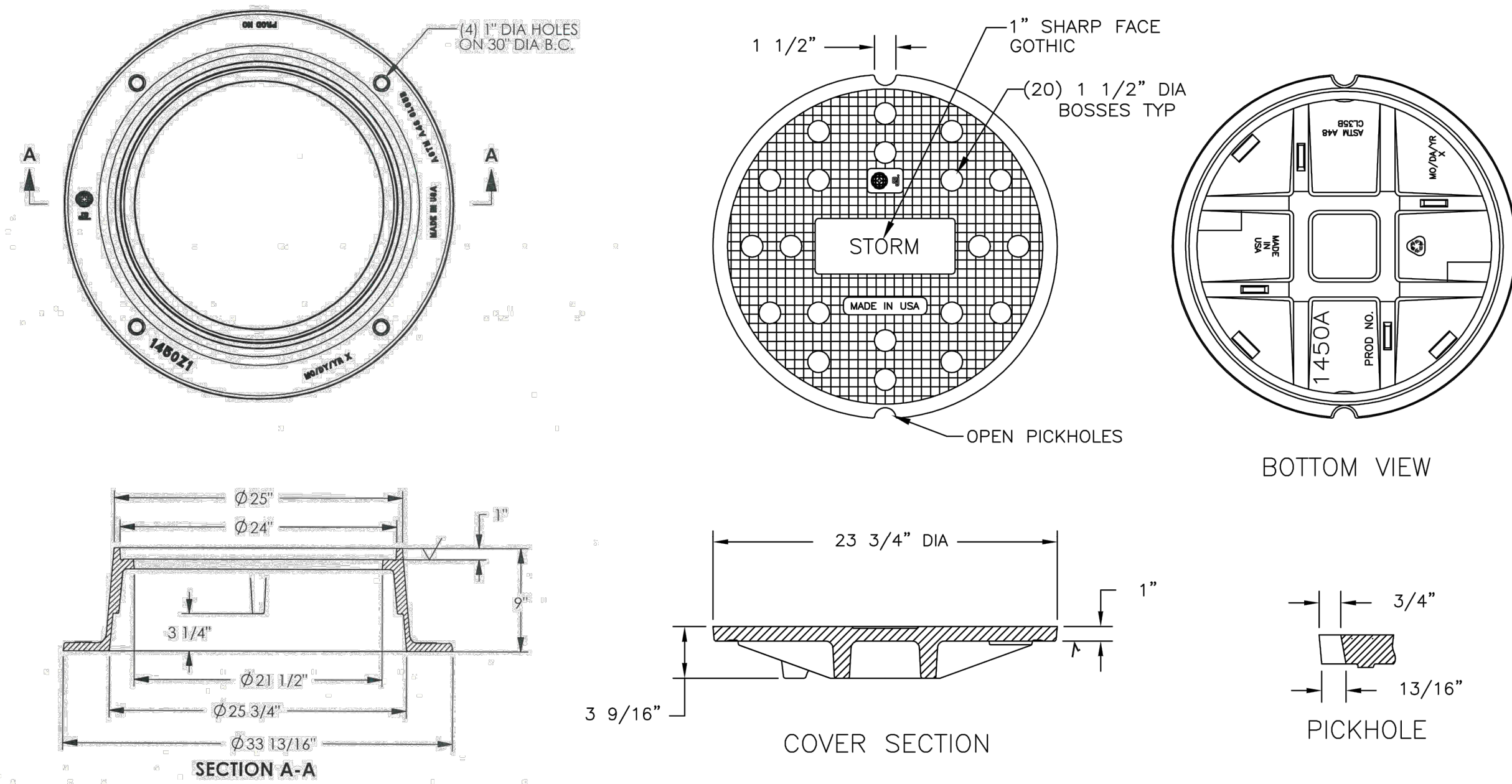
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PROJECT NO.
220991 5B

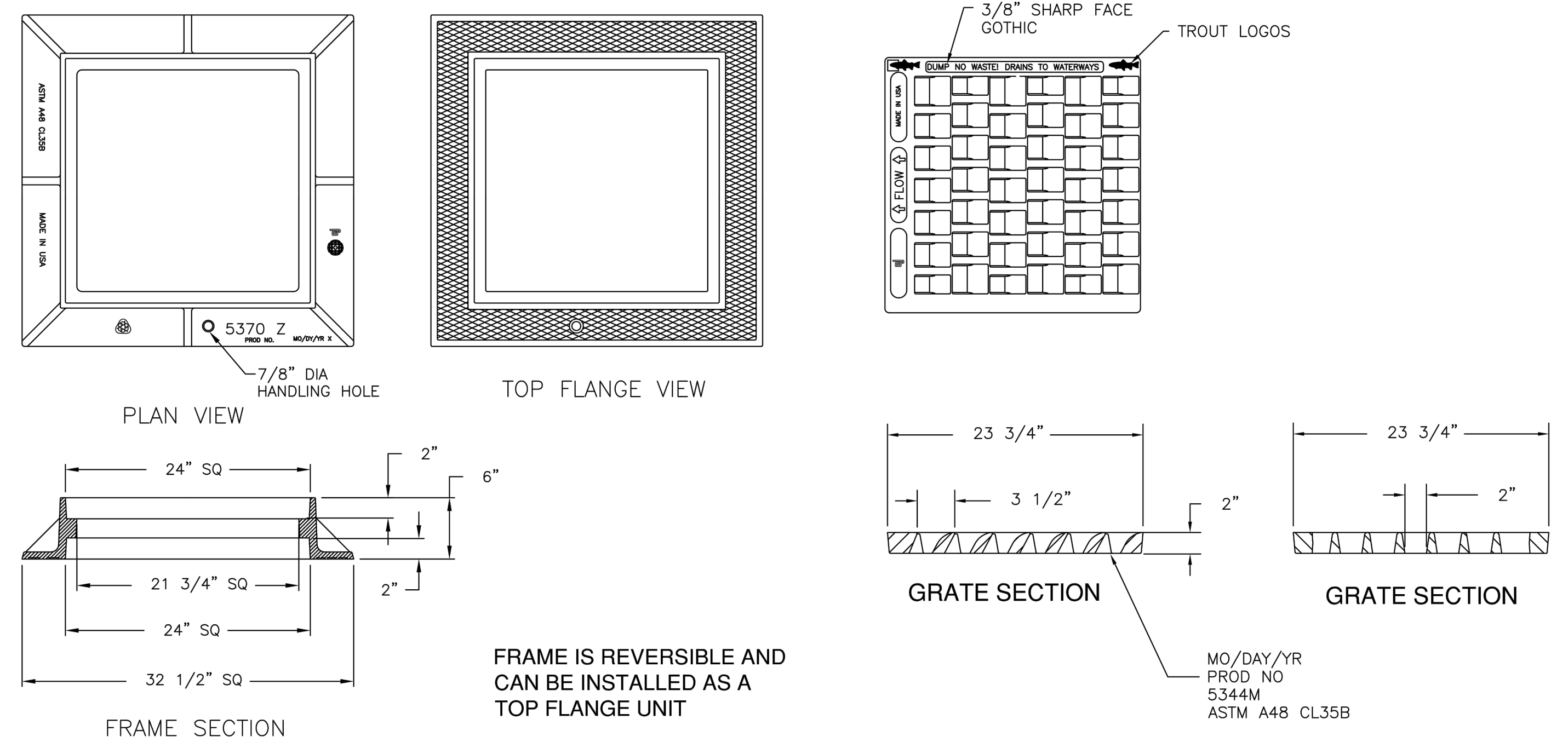
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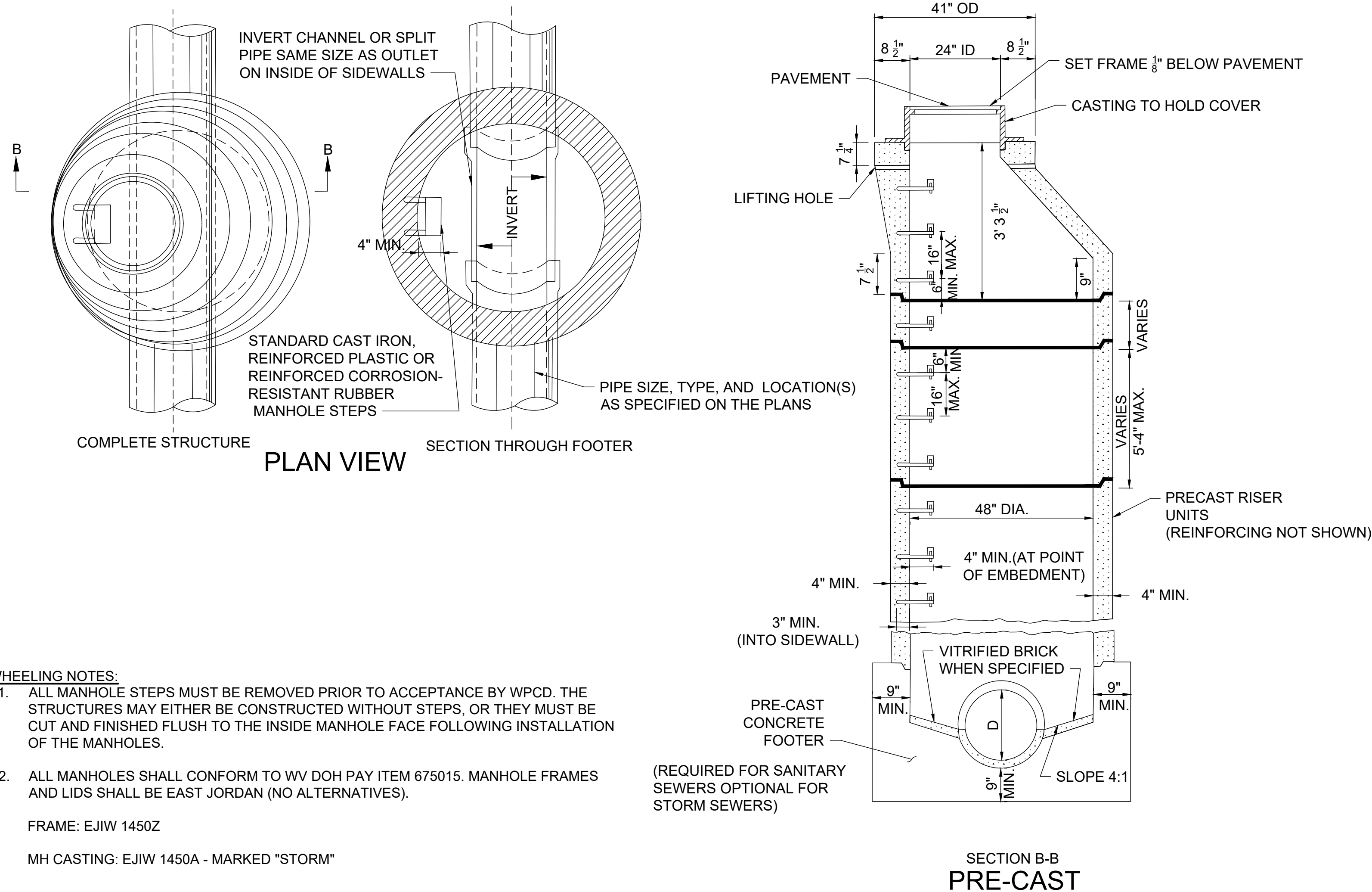
SHEET **7** OF **11**



EAST JORDAN MANHOLE FRAMES AND LIDS



EAST JORDAN CATCH BASIN FRAMES AND GRATES



WDOT TYPE A MANHOLE

NOTES:

TYPE A MANHOLES, WHEN SPECIFIED ON THE PLANS, MAY BE CONSTRUCTED IN EITHER METHOD (CAST-IN- PLACE OR PRE-CAST OPTION) AS SHOWN HEREIN.

STEPS, FRAMES, AND COVERS SHALL BE AS SHOWN ON WVDOT STANDARD SHEET DR7-X. "KEYED" OR "DOWELED" TYPE CONSTRUCTION JOINTS, ACCEPTABLE TO THE ENGINEER, MAY BE USED IN THE CONSTRUCTION OF THE CONCRETE MANHOLES.

IF THE CAST-IN-PLACE MANHOLE IS OVER TWELVE FEET (12') IN DEPTH, THE SIDEWALLS BELOW THAT DEPTH WILL BE DOUBLE IN THICKNESS.

PIPE AT ELEVATION OTHER THAN SHOWN MAY BE JOINED TO THE MANHOLE BY CUTTING A HOLE THE SIZE OF THE CONNECTING PIPE IN THE MANHOLE, INSERTING THE PIPE THE THICKNESS OF THE MANHOLE SHELL AND CLOSING ALL OPENINGS AROUND THE CONNECTING PIPE WITH JOINT MORTAR.

DRAWING SHOWS PIPE ENTERING AND LEAVING MANHOLE IN A STRAIGHT LINE. HOWEVER, THE PIPES MAY ENTER OR LEAVE AT AN ANGLE OR PLACE AS CALLED FOR OR SHOWN ON THE PLANS.

MINIMUM HEIGHT OF BENCH WALL ABOVE FLOWLINE OF THE PIPE IS 25% OF THE DIAMETER OF THE PIPES.

THE USE OF BRICK FOR MANHOLE CONSTRUCTION WILL NOT BE ALLOWED WHEN A MANHOLE IS LOCATED IN THE ROADWAY.

THE FOLLOWING ADDITIONAL NOTES ARE APPLICABLE FOR PRE-CAST MANHOLES:

MANHOLE STEPS SHALL BE PLACED INTO PLASTIC CONCRETE WALL DURING MANUFACTURE OR MORTARED INTO HOLES AFTER THE CONCRETE HAS SET.

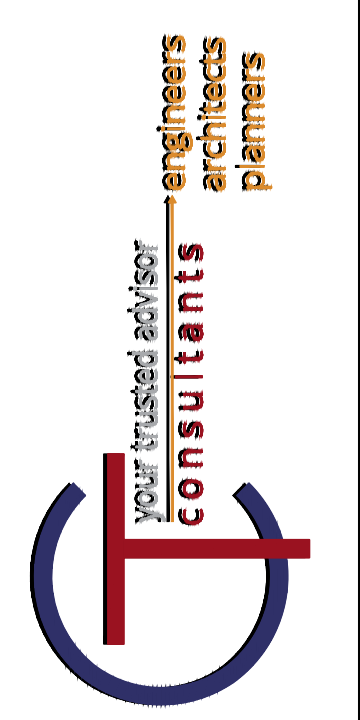
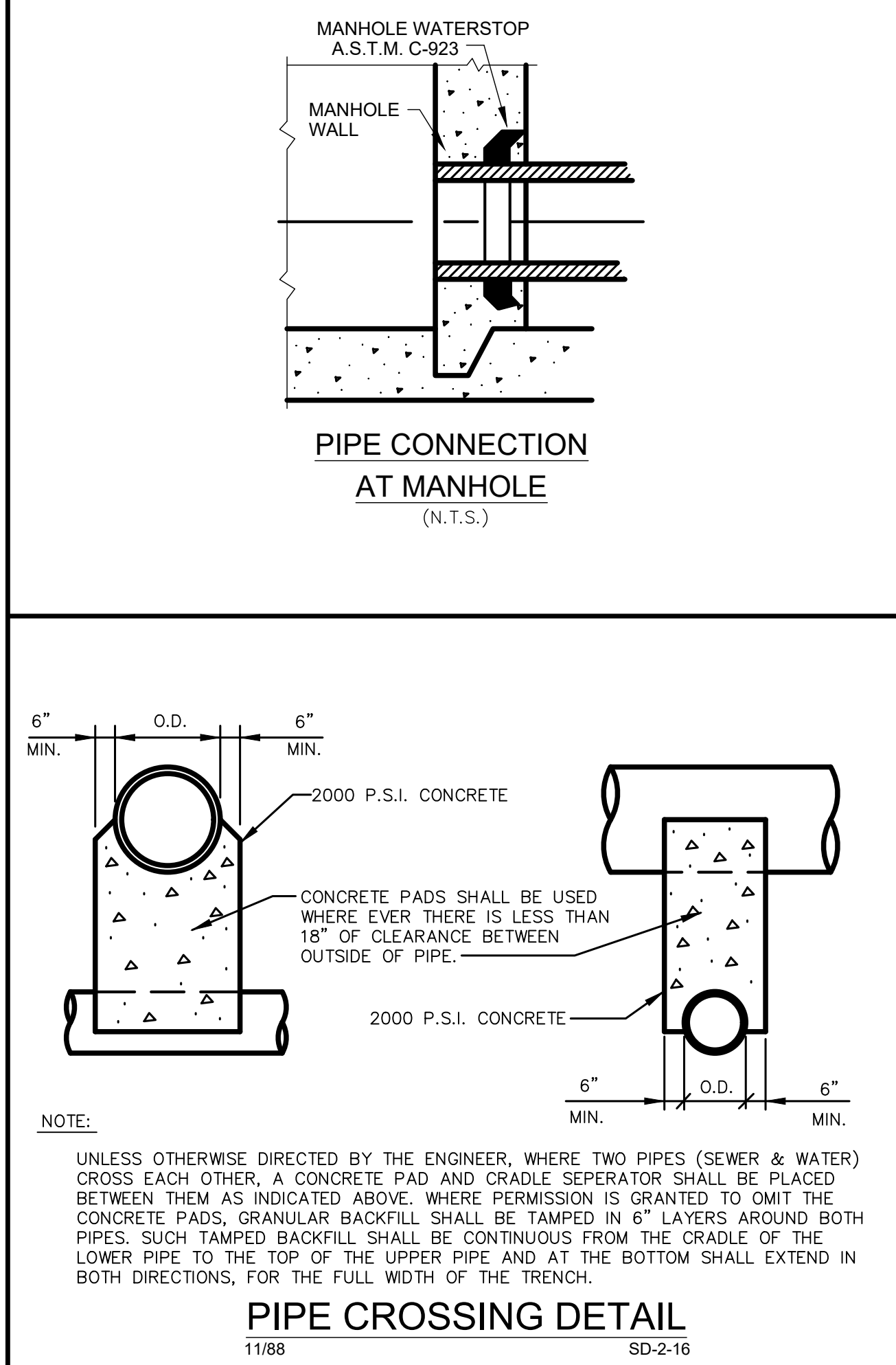
SIDEWALL SECTIONS MAY BE USED IN ANY COMBINATION TO PRODUCE A MANHOLE OF DESIRE DEPTH, EXCEPT THE TAPERED TOP SECTION SHALL BE RETAINED AS SHOWN.

THE TAPERED TOP SECTION SHALL BE MANUFACTURED AND MEET THE SAME REQUIREMENTS AS THE MANHOLE'S SIDEWALLS, BUT SHALL CONFORM TO THE DIMENSIONS DETAILED HEREIN.

LIFTING HOLES IN THE TAPERED TOP SECTION AND THE CIRCUMFERENTIAL NOTCHES IN THE MANHOLE COVER ARE FOR HANDLING PURPOSES ONLY.

THE PRE-CAST SIDEWALL UNITS SHALL BE SET IN JOINT MORTAR OR SEALED WITH O-RING GASKETS.

PRE-CAST CONCRETE MANHOLES SHALL CONFORM TO WVDOT SPECIFICATION SECTION 715.19.

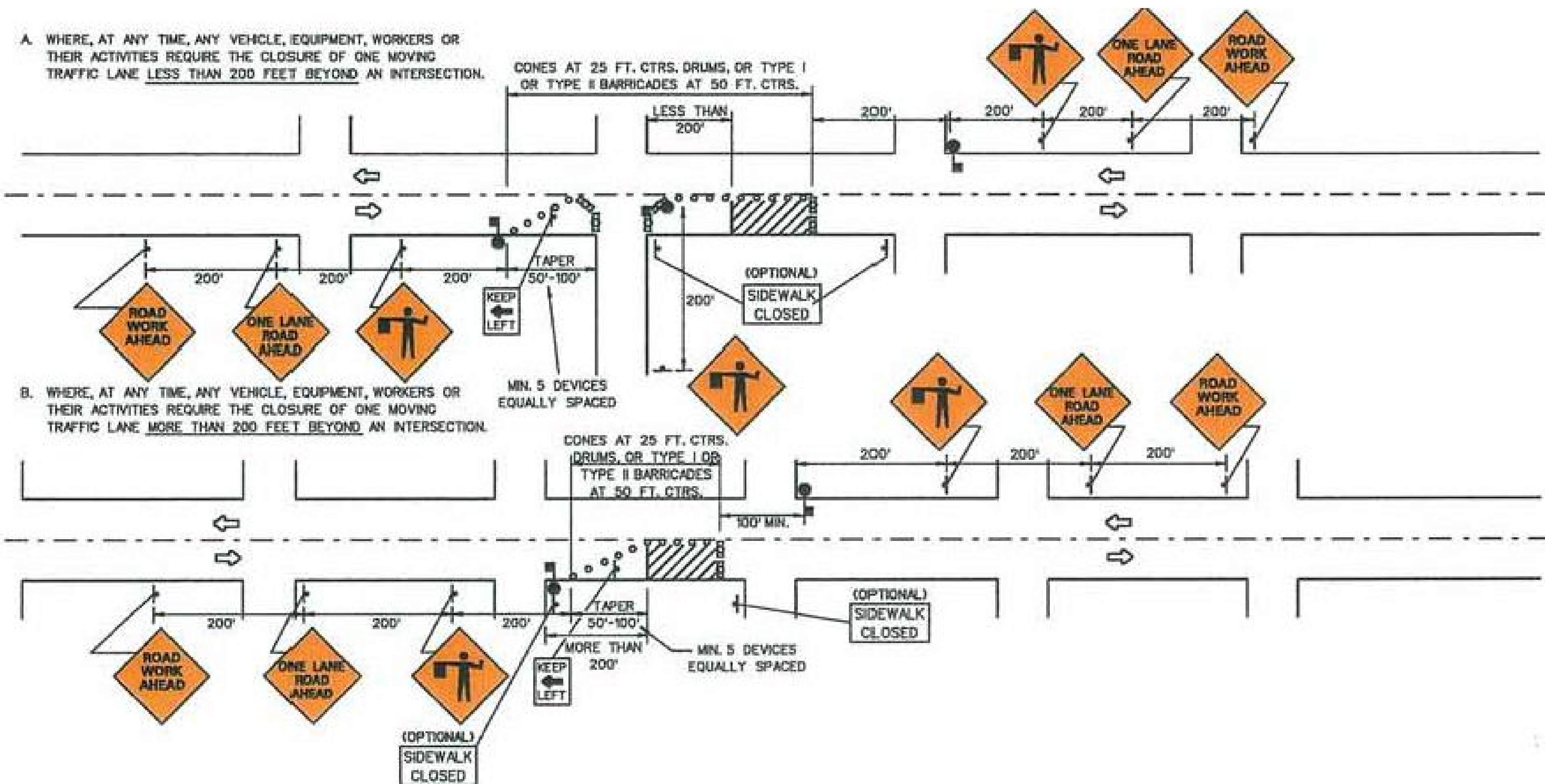


NO.	REVISION	DATE

**WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT
VALLEYVIEW STORM SEWER IMPROVEMENTS**

STANDARD DETAILS

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A. WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES REQUIRE THE CLOSURE OF ONE MOVING TRAFFIC LANE LESS THAN 200 FEET BEYOND AN INTERSECTION.

B. WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES REQUIRE THE CLOSURE OF ONE MOVING TRAFFIC LANE MORE THAN 200 FEET BEYOND AN INTERSECTION.

SYMBOLS

- TYPE I OR TYPE II BARRICADES WITH FLASHING LIGHT (TYPE "A").
- WORK AREA.
- SIGN
- CONES OR DRUMS (TYPE II BARRICADES OPTIONAL).
- SIGN ON PORTABLE OR PERMANENT SUPPORT.
- FLAGGER WITH PADDLE.

GENERAL NOTES

1. DRUMS OR TYPE II BARRICADES SHALL BE USED IN LIEU OF CONES FOR NIGHT OPERATIONS.
2. IF THE WORK OPERATION PERFORMED DOES NOT EXCEED 15 MINUTES, SIGNING SHALL BE IN CONFORMANCE WITH CASE A6.
3. WHERE THE WORK AREA EXTENDS THROUGH THE INTERSECTION, BARRICADES AND/OR ADEQUATE WARNING SIGNS SHALL BE ERECTED ON THE CROSS STREET.
4. IF THE WORK AREA IS IN THE PARKING LANE A ROAD WORK AHEAD SIGN SHALL BE INSTALLED 200 FT. IN ADVANCE OF THE WORK AREA AND THE WORK AREA PROTECTED WITH CONES, DRUMS OR BARRICADES.
5. CONSTRUCTION OPERATIONS SHALL BE CONFINED TO ONE TRAFFIC LANE, LEAVING THE OPPOSITE LANE OPEN TO TRAFFIC. AT LEAST 500 FT. OF BOTH TRAFFIC LANES SHALL BE AVAILABLE FOR TRAFFIC MOVEMENT AT INTERVALS NOT GREATER THAN 1,000 FT.
6. THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.
7. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS THREE DAYS.
8. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ABOVE WARNING SIGNS, AS NEEDED ON THE PLANS, AND/OR AS DIRECTED BY THE ENGINEER.
9. ALL VEHICLES, EQUIPMENT, WORKERS (EXCEPT FLAGGERS) AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

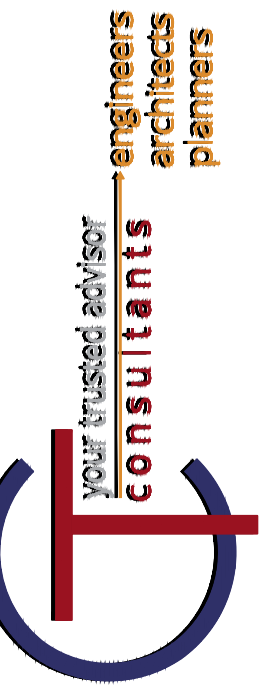
CASE B1

TWO-LANE, TWO-WAY TRAFFIC UNDIVIDED, URBAN, LOW-VOLUME, LOW-SPEED DAY OR NIGHT OPERATIONS

WHERE, AT ANY TIME, ANY VEHICLE EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRDACH ON THE PAVEMENT REQUIRING THE CLOSURE OF ONE TRAFFIC LANE.

NOTES:

1. DURING DAYTIME OPERATION, CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC.
3. ROADWAYS SHALL ONLY BE CLOSED ONE LANE AT A TIME. PROVIDE A SIGNED PEDESTRIAN DETOUR, ROADWAY CLOSED AHEAD SIGNS, AND PEDESTRIAN BARRICADES.
4. AT NO TIME SHALL THE ROADWAY BE CLOSED DURING DAYTIME OPERATION.
5. CONTRACTOR SHALL COORDINATE WITH INDIVIDUAL BUSINESSES TO MAINTAIN TRUCK AND SHIFT TRAFFIC.



DATE	REVISION	NO	REVIEW	ISSUED FOR
			3/21/2024	AS SHOWN
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WATER POLLUTION CONTROL DIVISION
WASTEWATER COLLECTION AND TREATMENT
VALLEYVIEW STORM SEWER IMPROVEMENTS

MAINTENANCE OF TRAFFIC

PROJECT NO.	220991 5B
DISCIPLINE	CIVIL
SHEET NAME	MOT
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