CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A

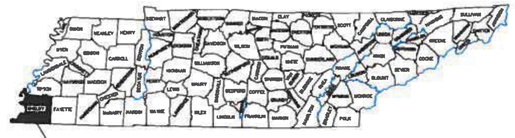
PUBLIC WORKS PROJECT

CITY OF LAKELAND, TN

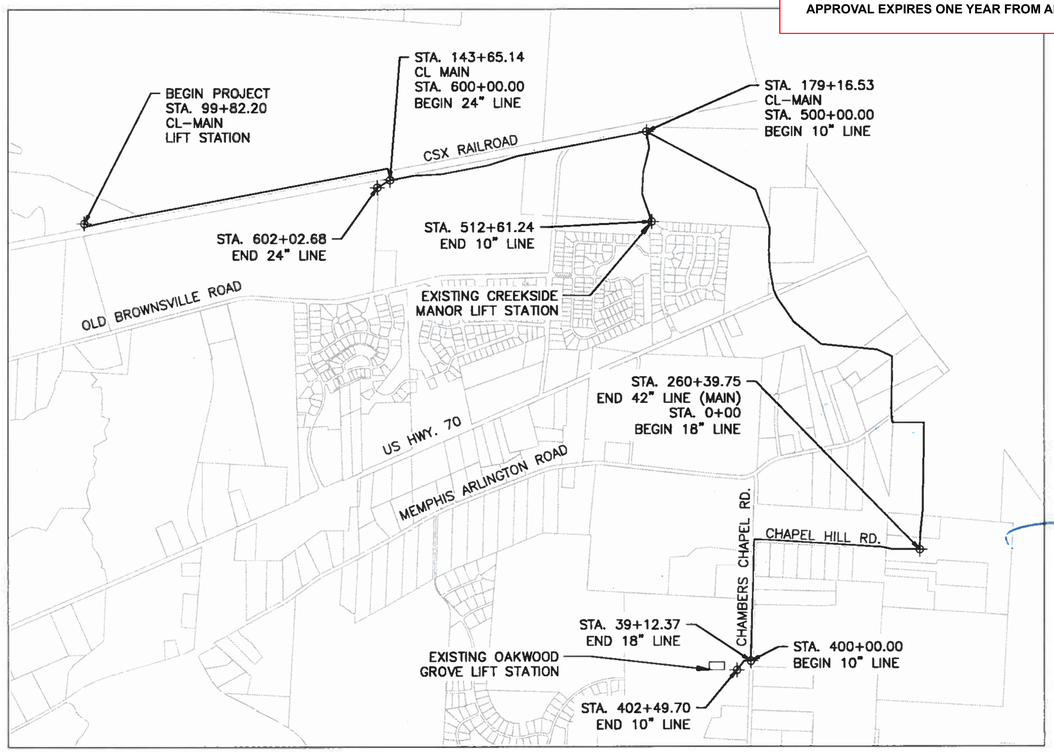
SRF 2022-476

RECEIVED
March 10, 2021
TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
State Revolving Fund Loan Program

SRF 2022-476
WPN 18.0304R
APPROVED FOR CONSTRUCTION
THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE
TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER RESOURCES, SRF Loan Program
AND IS HEREBY APPROVED FOR CONSTRUCTION BY THE COMMISSIONER
Rowdy Anglin
December 15, 2022
THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE COMMISSIONER THAT THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS.
APPROVAL EXPIRES ONE YEAR FROM ABOVE DATE



2 / G-001 VICINITY MAP



1 / G-001 LOCATION MAP
0 1000' 2000'

BOARD OF COMMISSIONERS

MIKE CUNNINGHAM – MAYOR

JOSH ROMAN	VICE–MAYOR
MICHELE DIAL	COMMISSIONER
RICHARD GONZALES, JR.	COMMISSIONER
WESLEY WRIGHT	COMMISSIONER

DEPARTMENT OF PUBLIC WORKS

EMILY HARRELL, P.E., CPESC
CITY ENGINEER

PLANS PREPARED AND SUBMITTED BY:

Diane Vesely 6/22/2022
DIANE VESELY, P.E. DATE
TN LICENSE # 114038
PROJECT ENGINEER
BUCHART HORN, INC.

APPROVED BY:
Emily Harrell 6/22/22
EMILY HARRELL, P.E., CPESC DATE
CITY ENGINEER

INDEX TO SHEETS

BUCHART HORN, INC.
ENGINEERS, ARCHITECTS AND PLANNERS

BUCHART HORN ENGINEERS • ARCHITECTS • PLANNERS

STATE OF TENNESSEE — DIANE C. VESELY — REGISTERED ENGINEER — 114038 — 07/18/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	G–001.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMATIC.
DRAWING SHALL NOT BE SCALED.
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TITLE SHEET

DRAWING NO. G–001
SHEET 1 OF 87

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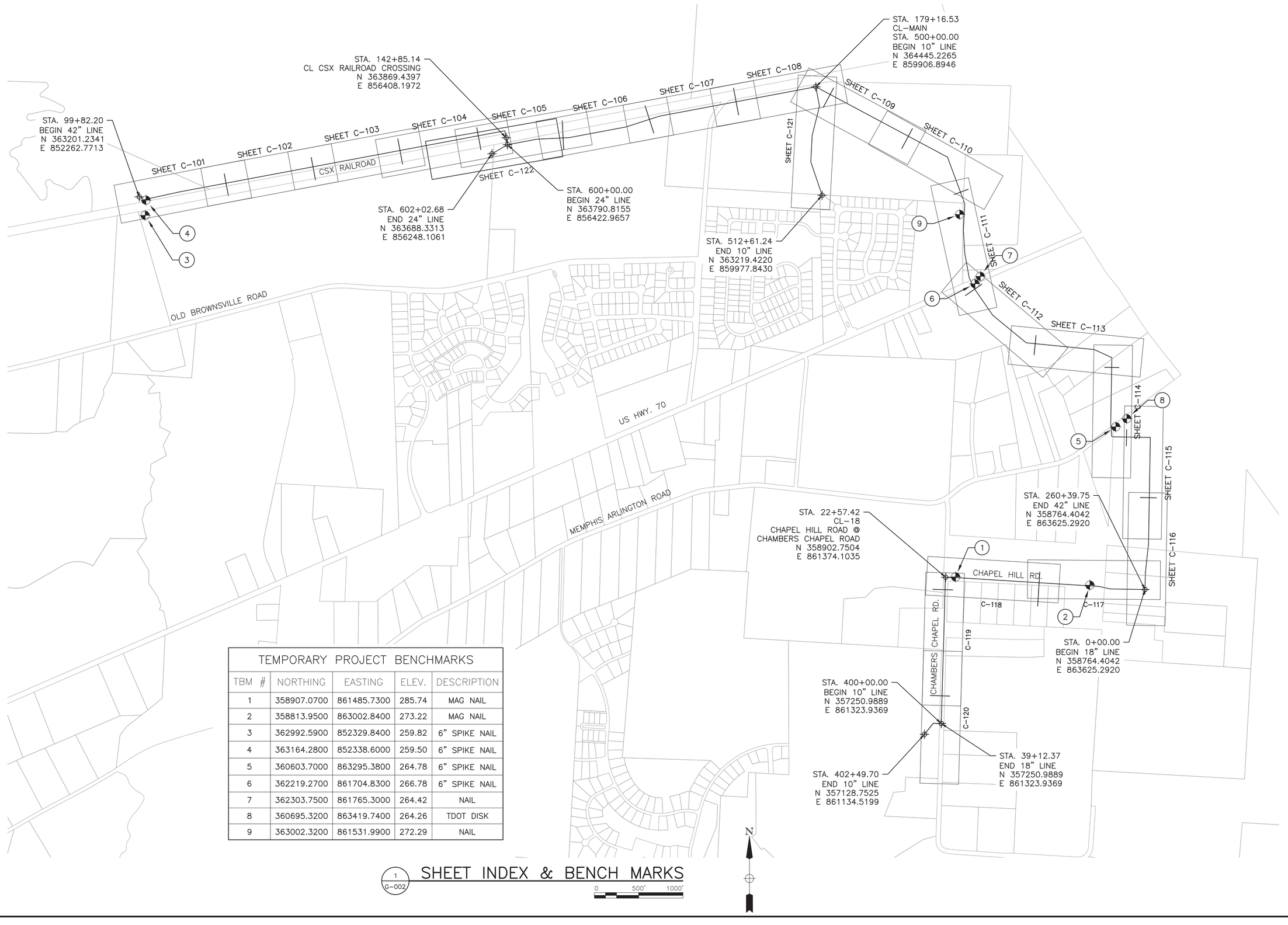

TEMPORARY PROJECT BENCHMARKS				
TBM #	NORTHING	EASTING	ELEV.	DESCRIPTION
1	358907.0700	861485.7300	285.74	MAG NAIL
2	358813.9500	863002.8400	273.22	MAG NAIL
3	362992.5900	852329.8400	259.82	6" SPIKE NAIL
4	363164.2800	852338.6000	259.50	6" SPIKE NAIL
5	360603.7000	863295.3800	264.78	6" SPIKE NAIL
6	362219.2700	861704.8300	266.78	6" SPIKE NAIL
7	362303.7500	861765.3000	264.42	NAIL
8	360695.3200	863419.7400	264.26	TDOT DISK
9	363002.3200	861531.9900	272.29	NAIL

1 G-002 SHEET INDEX & BENCH MARKS

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

PLANNED BY VERDELY BRASWELL ENGINEER 6/17/2022 STATE OF TENNESSEE

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	G-002.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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DRAWING SHALL NOT BE SCALED.

SHEET INDEX & BENCH MARKS

DRAWING NO. G-002

SHEET 2 OF 87

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GENERAL NOTES:

1. BIDDER SHALL VISIT THE PROJECT SITE AND COMPLETELY INFORM HIMSELF OF THE CHARACTERISTICS OF THE AREA RELATIVE TO THE CONSTRUCTION PRIOR TO SUBMITTING A BID.
2. THE CONTRACTOR, AT HIS OWN EXPENSE, MAY MAKE ADDITIONAL SURVEYS AND SOIL INVESTIGATIONS AS HE DEEMS NECESSARY TO DETERMINE CONDITIONS THAT WILL AFFECT THE PERFORMANCE OF THE WORK.
3. HORIZONTAL AND VERTICAL CONTROL POINTS HAVE BEEN ESTABLISHED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION LAYOUT USING CONTROL POINTS PROVIDED BY THE ENGINEER ON THESE PLANS.
4. THE LINES AND GRADES SHOWN ON THE PLANS MAY BE VARIED SLIGHTLY BY THE ENGINEER IN THE FILED IF CONDITIONS JUSTIFY SUCH A VARIATION. THE CONTRACTOR SHALL NOT BE ENTITLED TO AN EXTRA PAYMENT OTHER THAN WHATEVER INCREASE IN CONTRACT QUANTITIES IS INVOLVED.
5. THE CONTRACTOR SHALL FURNISH AN AS-BUILT SURVEY OF THE COMPETED WORK, SIGNED AND SEALED BY A LAND SURVEYOR LICENSED IN THE STATE OF TENNESSEE. ELEVATIONS INDICATED ON THE PLANS MUST BE CONSTRUCTED WITHIN 0.2 FEET OF PLAN GRADE. THE CONTRACTOR SHALL CORRECT ANY WORK NOT MEETING THE REQUIRED TOLERANCE AND CORRECTED WORK SHALL BE RE-SURVEYED UNTIL THE REQUIRED TOLERANCE IS MET.
6. PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION
7. THE CONTRACTOR MUST FIELD VERIFY ALL ELEVATIONS OF ALL EXISTING INVERTS THAT ARE PART OF THE PROJECT.
8. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
9. VERIFY SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE LAKELAND CITY ENGINEER AT 901-867-5418. OF ANY VARIATIONS PRIOR TO COMMENCEMENT OF WORK.
10. ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CITY OF LAKELAND STANDARD CONSTRUCTION SPECIFICATIONS. IF THERE IS A DISCREPANCY BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CITY'S STANDARD CONSTRUCTION SPECIFICATIONS, THE MORE STRINGENT CRITERIA SHALL APPLY TO THE PROJECT. THE CITY OF LAKELAND STANDARD CONSTRUCTION SPECIFICATIONS ARE LOCATED AT: HTTP://WWW.LAKELANDTN.GOV/INDEX.ASPX?NID=343.
11. ALL EQUIPMENT AND MATERIALS HAULED TO OR FROM THE PROJECT SITE WILL BE BY A ROUTE APPROVED OR DESIGNATED BY THE CITY OF LAKELAND PRIOR TO CONSTRUCTION.
12. CONTRACTOR SHALL PREPARE AND SUBMIT BOTH PRE- AND POST-CONSTRUCTION VIDEOS OF THE AREA. VIDEOS SHALL BE SUBMITTED TO THE LAKELAND CITY ENGINEER IN A FORMAT TO BE SPECIFIED BY THE CITY.
13. AT LEAST ONE (1) WEEK PRIOR TO BEGINNING CONSTRUCTION OPERATIONS, CONTRACATOR SHALL NOTIFY IN WRITING ALL THOSE DIRECTLY AFFECTED BY THE WORK INCLUDING BUT NOT LIMITED TO FIRE, AMBULANCE, POLICE DEPARTMENTS, UTILITY COMPANIES, AND THE LAKELAND CITY ENGINEER.
14. THE CITY OF LAKELAND SHALL RETAIN AN INDEPENDED TESING LABORATORY TO PERFORM ALL TESING REQUIRED BY THE CONTRACT DOCUMENTS.

PERMITS, PLANS & RECORDS

15. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL PROJECT PERMITS.
16. ANY DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE LAKELAND CITY ENGINEER TO DETERMINE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
17. IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE LAKELAND CITY ENGINEER SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED AND IF ANY PLAN REVISIONS ARE NEEDED.
18. THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATE. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE LAKELAND CITY ENGINEER TO COMMENCE PERMIT RENEWAL PROCESS.
19. ALL WATER QUALITY PERMITS SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS INFORMATION SHALL ALSO BE POSTED AT THE CONTRACTOR'S JOB TRAILER AND MATERIAL STAGING AREA. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.
20. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO IDENTIFY AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE CONTRACTOR'S MATERIAL AND STAGING AREAS, ANY BORROW OR WASTE AREAS, HAUL ROUTES, OR ANY OTHER OFF SITE AREAS ASSOCIATED WITH THE PROJECT CONSTRUCTION. ANY SUCH PERMITS SHALL BE SUBMITTED TO THE CITY OF LAKELAND PRIOR TO THE USE OF THE PERMITTED AREA(S). THE CONTRACTOR SHALL ENSURE THAT WORK AT THE PERMITTED SITES DOES NOT EXCEED THE PERMIT EXPIRATION DATE. RENEWAL OF PERMITS REQUIRED IN THIS PARAGRAPH ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL ALSO SUPPLY EPSC PLANS FOR THE MATERIAL STAGING, WASTE HAUL, AND/OR BORROW AREAS TO THE TDEC FIELD OFFICE FOR REVIEW AND APPROVAL.

GOOD HOUSKEEPING MEASURES AND WASTE DISPOSAL

21. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.
22. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION. APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED.
23. CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE.
24. WHEEL WASH WATER SHALL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER SHALL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.
25. IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.
26. ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.
27. WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.
28. ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
29. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.
30. OPEN BURNING IS PROHIBITED.
31. DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS ACCEPTABLE. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.
32. WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR.
33. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.
34. NOISE CONTROL. CONTRACTOR SHALL TAKE REASONABLE MEASURES TO AVOID UNNECESSARY NOISE APPROPRIATE FOR THE AMBIENT SOUND LEVELS IN THE AREA DURING WORKING HOURS. CONSTRUCTION MACHINERY AND VEHICLES SHALL BE EQUIPED WITH PRACTICAL SOUND MUFFLING DEVICES AND OPERATED IN A MANNER TO CAUSE THE MINIMIZE NOISE IMPACTS.
35. DUST CONTROL. CONTRACTOR SHALL TAKE REASONABLEE MEASURES TO PREVENT UNNECESSARY DUST. EACH SURFACE SUBJECT TO GENERATING DUST SHALL BE KEPT MOIST WITH WATER OR BY APPLICATION OF A CHEMICAL DUST SUPPRESSANT. DUSTY MATERIALS IN PILES OR IN TRANSIT SHALL BE COVERED TO PREVENT BLOWING.

UTILITIES (ALSO SEE OVERHEAD ELECTRIC NOTES SHEET G-004)

36. LOCATION OF EXISTING UTILITIES ON THE PLAN SHEETS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED, IN PART, ON INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, WHETHER OR NOT THEY ARE SHOWN ON THE DRAWINGS, AND TAKE NECESSARY PRECAUTIONS TO AVOID DISRUPTIONS IN SERVICE.
37. FOR SITE LOCATION OF EXISTING UTILITIES INVOLVING MLG&W, TEXAS GAS COMPANY, TVA, AND COMMUNICATION COMPANIES CALL 811. FOR SEWER LOCATIONS, CALL THE LAKELAND CITY ENGINEER. FOR RAILROAD SIGNAL DEVICES, CONTACT CSX.
38. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY COMPANIES THAT MAINTAIN A UTILITY LINE WITHIN THE BOUNDARIES OF THE PROJECT PRIOR TO THE INITIATION OF ANY CONSTRUCTION IN THE PROJECT AREA AND AGAIN 1 WEEK PRIOR TO CONSTRUCTION ACTIVITIES THAT WILL DIRECTLY AFFECT THE UTILITY. REFER TO ALL PERMITS FOR ADDITIONAL COMMUNICATION REQUIREMENTS.
39. EXTREME CARE MUST BE TAKEN SO AS TO NOT MAR OR INJURE ANY GAS, SEWER, WATER, POWER, OR COMMUNICATION (ALL TYPES) LINES. WHERE APPLICABLE, THE UTILITY OWNER SHALL BE NOTIFIED THAT RELOCATION IS NECESSARY AND SHALL BE GIVEN ADEQUATE TIME TO PROVIDE FOR THE RELOCATION. WHERE A UTILITY IS EXPOSED, BUT WILL NOT BE RELOCATED, THE CONTRACTOR SHALL PROPERLY BED AND BACKFILL AROUND THE UTILITY AS INSTRUCTED BY THE UTILITY OWNER OR PAY FOR THE UTILITY TO BED AND BACKFILL THE EXPOSED UTILITY.
40. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES WITHIN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITIES ENCOUNTERED WHETHER SHOWN ON THE CONSTRUCTION PLANS OR NOT. THE DAMAGES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AS DIRECTED BY THE UTILITY.
41. ALL WORK AROUND OVERHEAD POWER LINES SHALL BE IN ACCORDANCE WITH OSHA REGULATIONS AND THE REQUIREMENTS OF THE OWNING UTILITY COMPANY.
42. PRIOR TO REMOVING EXISTING UTILITIES, THE CONTRACTOR SHALL VERIFY THAT THE UTILITY IS NO LONGER IN SERVICE.
43. SEE ADDITIONAL UTILITY COORDINATION REQUIREMENTS AS LISTED ON THE PROJECT PLANS SHEETS AND UTILITY PERMIT DOCUMENTS.
44. OUTAGES AS MAY BE REQUIRED TO PERFORM CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH LAKELAND CITY ENGINEER AND AFFECTED PROPERTY OWNERS. CONTRACTOR WILL PROVIDE TEMPORARY WATER, SEWER, AND ELECTRIC SERVICE TO PROPERTIES WHERE PERMANENT FACILITIES WILL BE OUT OF SERVICE FOR EIGHT HOURS OR LONGER.

GRADING, EXCAVATION AND SEWERAGE WORK

45. NOTHING IN THESE GENERAL NOTES OR ANY OTHER CONTRACT DOCUMENTS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.
46. ALL GRADING WORK SHALL BE PERFORMED IN SUCH A MANNER THAT ADJACENT PROPERTIES ARE NOT DAMAGED OR ADVERSELY AFFECTED.
47. GRADING, CLEARING AND THE ERECTION OR REMOVAL OF FENCES ALONG PROPERTY LINES SHALL BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.
48. CONTRACTOR SHALL NOT RESTRICT DRAINGE FLOW DURING RAINSTORMS EXCEPT AS REQUIRED FOR EROSION AND SEDIMENT CONTROL
49. ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
50. THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.
51. ALL NEWLY CUT OR FILLED AREAS, LACKING ADEQUATE VEGETATION, SHALL BE SEEDED, MULCHED, FERTILIZED AND/OR SODDED AS REQUIRED TO EFFECTIVELY CONTROL SOIL EROSION.
52. ALL FILL SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698) WITHIN 3% OF OPTIMUM MOISTURE CONTENT IN LIFTS NOT TO EXCEED SIX (6) INCHES OF COMPACTED THICKNESS.
53. BORING DEPICTIONS PROVIDED IN THE GEOTECHNICAL DATA REPORT INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.
54. THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE DATA REPORT, PERMITS AND CONTRACT DOCUMENTS AS WELL AS HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
55. GRADING AND EARTHWORK IS PART OF THE EXCAVATION AND BACKFILL ACTIVITIES PAID FOR UNDER THE PER LINEAR FOOT OR LUMP SUM PRICE FOR ASSOCIATED ACTIVITIES SUCH AS SEWER AND MANHOLE INSTALLATION. NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK BASED SOLELY ON A CLAIM THAT THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION.
56. THE CONTRACTOR IS ENTIRELY RESPONSIBLE FOR PROTECTION OF EXCAVATION AGAINST CAVING OR SETTLING.
57. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF HIS WORKERS AND THE PUBLIC AND ALL DAMAGE TO PAVEMENTS, BUILDINGS, HOUSES, FENCES AND OTHER PROPERTY CAUSED BY HIS EXCAVATION.
58. THE CONTRACTOR SHALL PROTECT THE SIDES OF HIS EXCAVATION BY SHEETING AND BRACING OR OTHER SHORING METHODS AS MAY BE NECESSARY. THE COST TO SUPPORT THE EXCAVATIONS IS INCLUDED IN ASSOCIATED ACTIVITIES SUCH AS SEWER AND MANHOLE INSTALLATION
59. ALL TREES WITHIN THE PERMANENT CONSTRUCTION EASEMENT ARE TO BE REMOVED AND WILL BE INCLUDED WITH THE COST OF SITE PREPARATION.
60. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO ADJACENT PROPERTY OR STRUCTURES AS A RESULT OF TREE CUTTING OPERATIONS.
61. ALL EXCAVATED MATERIAL NOT USED OR USEABLE FOR CONSTRUCTION ELSEWHERE IN THIS JOB SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE HAULED OFF SITE AND DISPOSED OF LEGALLY AND PROPERLY.
62. DEWATERING OPERATIONS INCLUDING EQUIPMENT, OPERATIONS, PERMITTING AND MAINTENANCE REQUIRED FOR CONSTRUCTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN OTHER BID ITEMS.
63. CONTRACTOR TO MAINTAIN GROUND WATER 3 FOOT BELOW THE BOTTOM OF THE EXCAVATION.

DRAINAGE

64. THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.
65. EXCAVATION WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).
66. WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.
67. DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.
68. ALL EXISTING PIPES AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER THAT ARE TO BE LEFT IN PLACE AND ABANDONED MUST BE BACKFILLED AND PLUGGED WITH FLOWABLE FILL.

FENCING

69. THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS TWO WEEKS NOTICE PRIOR TO CUTTING FENCES.
70. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ACCESS CONTROL FENCES PRIOR TO CUTTING EXISTING STOCK FENCES IN AREAS UTILIZED BY DOMESTIC LIVESTOCK OR OTHER AREAS AS DIRECTED BY THE CITY OF LAKELAND CONSTRUCTION INSPECTION OFFICE
71. ALL FENCES THAT ARE REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN KIND WITH NEW MATERIALS.

SEEDING AND SODDING

72. SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES. ALL SODDED AREAS WITHIN 40' OF TOP OF STREAMBANK SHALL BE OVERSEEDED.
73. SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.
74. SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET, SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

ENVIRONMENTAL INSPECTION, MAINTENANCE & REPAIR

75. REFER TO THE STORM WATER POLLUTION AND PREVENTION PLAN (SWPPP) AND EPSC SHEETS, PERMITS, AND RECORDS NOTES.

WORKING HOURS

76. WORKING HOURS SHALL BE FROM 7AM TO 7PM MONDAY THROUGH FRIDAY WITH THE EXCEPTION OF THE CSX JACK AND BORE INSTALLATION WHICH SHALL RUN CONTINUOUS UNTIL COMPLETED. CONTRACTOR TO SCHEDULE THE RR CROSSING SO THAT WORK DOES NOT EXTEND TO A WEEKEND.

FOUNDATION NOTES

77. CONTRACTOR SHALL HIRE A GEOTECHNICAL ENGINEER FOR THE ENTIRE PROJECT DURATION TO PROVIDE CONSULTATION ON ALL SOIL RELATED ACTIVITES. NO CONSTRUCTION ON SUBGRADE SURFACES SHALL BE PERFORMED PRIOR TO THE GEOTECHNICAL ENGINEER'S INSPECTION AND APPROVAL OF SUBGRADE SURFACE.
78. TO BE CONFIRMED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER, MAXIMUM ALLOWABLE BEARING FOR NEW MANHOLE FOUNDATIONS IS 1100 PSF.
79. IF TESTING REVEALS LOWER ALLOWABLE BEARING PRESSURE THAN LISTED CONTACT THE ENGINEER. DO NOT PERFORM CUT AND FILL PROCEDURES WITHOUT THE APPROVAL OF THE ENGINEER.
80. ALL EXCAVATIONS SHALL BE PROPERLY AND CONTINUOUSLY DEWATERED DURING CONSTRUCTION TO MAINTAIN WATER 3 FOOT BELOW THE BOTTOM OF THE EXCAVATION.
81. OSHA APPROVED SLOPES SHALL BE CONTINOUSLY PROTECTED AGAINST EROSION.

CONTINUE GENERAL NOTES ON SHEET G-004

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VESSELY — REGISTERED ENGINEER — STATE OF TENNESSEE — 08/25/2021

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	G-003.DWG
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DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

GENERAL NOTES

DRAWING NO. G-003

SHEET 3 OF 87

GENERAL NOTES CONTINUED

NATURAL RESOURCES AND SPECIES

1. SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
2. NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
3. INSTREAM EPSC DEVICES REQUIRE A TDEC ARAP PERMIT
4. THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.
5. THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.
6. STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
7. HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.
8. WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.
9. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE CITY OF LAKELAND IMMEDIATELY.
10. NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.

ECOLOGY

11. STAFF FROM THE CITY OF LAKELAND OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN CITY OF LAKELAND OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.
12. STAFF FROM THE CITY OF LAKELAND OR A DESIGNEE SHALL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS THAT MUST BE FOLLOWED.
13. ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

14. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE PROVISION FOR CONSTRUCTION SIGNING AS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) LATEST EDITION.
15. A COMPLETE TRAFFIC CONTROL PLAN WILL BE SUBMITTED TO THE LAKELAND CITY ENGINEER A MINIMUM OF ONE (1) MONTH PRIOR TO THE START OF CONSTRUCTION OR ROAD CLOSURE.
16. ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
17. IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE CITY OF LAKELAND.
18. A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
19. TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
20. USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE LAKELAND CITY ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE ALTERNATE LOCATIONS AND REQUEST THE LAKELAND CITY ENGINEER'S APPROVAL TO USE THEM.
21. THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE ALTERNATE LOCATIONS AND REQUEST THE LAKELAND CITY ENGINEER'S APPROVAL TO USE THEM.
22. ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED, AND FLEXIBLE DRUMS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.
23. ALL SIGNS WHICH INTERFERE WITH CONSTRUCTION WILL BE RELOCATED OUTSIDE LIMITS OF CONSTRUCTION BY THE CONTRACTOR. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL RESTORE THE SIGNS TO ORIGINAL LOCATION. THE CONTRACTOR SHALL CHECK WITH THE LAKELAND CITY ENGINEER PRIOR TO MOVING ANY PERMANENT SIGNS.
24. ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.
25. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES AND POSTS AS INDICATE ON THE PLANS AND WHERE AND AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN PRICE BID FOR OTHER CONSTRUCTION ITEMS

ROAD CLOSURE

26. NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LAKELAND CITY ENGINEER. CONTRACTOR IS TO REOPEN ANY CLOSED ROAD DURING NO WORKING HOURS.

PAVING

27. THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

PRIVATE DRIVEWAYS, FIELD ENTRANCES, AND BUSINESS ENTRANCES WILL BE RESURFACED A PAVER WIDTH (LANE WIDTH) AS A MINIMUM. A PAVEMENT TAPER TO TRANSITION THE NEW PAVEMENT SHALL BE REQUIRED. THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE LAKELAND CITY ENGINEER. CONCRETE DRIVEWAYS WILL NOT BE PAVED.

DEMOLITION OF BUILDINGS

28. ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT SHALL BE COMPLETED PRIOR TO ANY DEMOLITION ACTIVITIES FOR BUILDINGS INCLUDED IN THE PROJECT. ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

FEMA

30. PORTIONS OF THE PROJECT ARE LOCATED IN A SPECIAL FLOOD AREA AS PER FLOODLINES ESTABLISHED BY FEMA AS SHOWN ON FLOOD INSURANCE RATE MAP 47157C02156G DATED FEBRUARY 6, 2013.

OVERHEAD ELECTRIC EASEMENT

32. WHERE CONSTRICTION CROSSES THE MLGW AND TVA OVERHEAD ELECTRIC EASEMENTS (MH CC-044 TO MH CC-045 AND MH CC-50 TO MH CC-050.1) CONTRACTOR TO BENCH THE EXCAVATION TO FACILITATE WORK BENEATH THE OVERHEAD ELECTRIC LINES.

WELL ABANDONMENT

33. ALL PERMITTING ASSOCIATED WITH WELL ABANDONMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE OBTAINED FROM THE SHELBY COUNTY HEALTH DEPARTMENT (901) 222-9599. WORK MUST BE PERFORMED BY A LICENSED CONTRACTOR.

SURVEY LEGEND

- Boring No.
- XUP Utility Pole
- XGW Guy Wire
- XWM Water Meter
- XMB Mail Box
- XLW Low Wire Crossing
- XIP Iron Pin
- XGV Gas Valve
- XSIGN1 Small 1–post Sign
- XWV Water Valve
- XFH Fire Hydrant
- XFP Fence Post
- XPL Property Corner
- XTPED Telephone Pedestal
- XTREE Single Tree
- XUM Misc. Utility Feature
- XMHSAS Sewer Manhole
- XSV Sewer Valve
- XWELL Well
- XPB Utility Pull Box
- PIPE Pipe
- 36STS 36"Storm Sewer
- 30STS 30"Storm Sewer
- 42STS 42"Storm Sewer
- EP Edge of Pavement
- DR Driveway
- RWP Ret. Wall (Private)
- PAD Miscellaneous Pad
- GL Gas Line
- WL Water Line
- SS SANITARY SEWER Line
- TOWER Tower
- RD Edge of Road
- AFLD Athletic Field
- FE Field Entrance
- TREE Tree Drip Line
- POND Pond
- FN Fence
- UGT Telephone (UG)
- EW End Wall
- DIT Paved Ditch
- BRI Bridges
- BC Building
- PK Parking Lot
- PL Property Line
- CV Culvert
- RR RailRoad
- CU Curb (Bottom w/BL at Top)
- FO Fiber Optic
- STR Stream
- WWC Wet Weather Conveyance
- BFE Base Flood Elevation
- EP Edge of Pavement
- DR Driveway
- Wetlands
- Wetlands to be Protected

PROPOSED LEGEND

- NEW STORM SEWER
- NEW STRUCTURES
- REMOVE & REPLACE CONC. OR ASPHALT PAVEMENT
- TRENCH PLUG

ABBREVIATIONS

ASPH.	ASPHALT
BFE	BASE FLOOD ELEVATION
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CONST.	CONSTRUCTION
DIA.	DIAMETER
DR.	DRIVEWAY
E	EAST
ELEV, EL	ELEVATION
ESM'T.	EASEMENT
EXIST., EX.	EXISTING
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
GRP	FIBERGLASS REINFORCED PIPE
HORIZ.	HORIZONTAL
INV	INVERT
LF	LINEAR FEET
LT.	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM

MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
OS	OFFSET
PPR-TW	POLYPROPYLENE RESIN IMPACT MODIFIED COPOLYMER -TRIPLE WALL EXUDED PIPE (SANITITE-HP)
R/W, ROW	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RD.	ROAD
REQ'D.	REQUIRED
RT.	RIGHT
SAN	SANITARY SEWER
STA.	STATION
STR	STREAM
TBM	TEMPORARY BENCH MARK
TP	TRENCH PLUG
TYP.	TYPICAL
VERT.	VERTICAL
WWC	WET WEATHER CONVEYANCE
WTL	WETLAND

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BE IT KNOWN THAT I HAVE EXECUTED OR SUPERVISED THE PREPARATION OF THIS DOCUMENT. STATE OF TENNESSEE 07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

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GENERAL
LEGEND &
ABBREVIATIONS

DRAWING NO.
G–004

SHEET 4 OF 87

42 INCH SANITARY SEWER DATA

DOWNSTREAM (DS) STUCTURE DATA								UPSTREAM (UP) STRUCTURE DATA		PIPE DATA				AS-BUILT DATA			
DS MH ID	Station	Rim Elev DS MH	MH DIA	Lined	Invert In DS MH	Secondary Invert in	Gooseneck opening elev.	UP MH ID	Invert out UP MH	Pipe Length	Slope	Pipe Material	Notes	Invert In DS MH	Invert out UP MH	Pipe Length	Slope
Wet Well	99+82.20		N/A		235.00		n/a	CC-001	235.01	15.30	0.06%	DIP	Use DIP				
CC-001	99+97.50	259.67	6.00	yes	235.11	250.65	261	CC-002	235.14	49.39	0.06%	DIP	8" PVC Sewer - Internal Drop MH w/ Bowl. Install Duckbill Valve in CC-002. Use DIP				
CC-002	100+46.89	259.58	6.00		235.24		261	CC-003	235.49	409.00	0.06%	GRP	WWTP Entrance Driveway				
CC-003	104+55.89	257.06	6.00		235.59		262	CC-004	235.82	394.11	0.06%	GRP	WTL-1 near MH CC-004				
CC-004	108+50.00	256.48	6.00		235.82		262	CC-005	236.06	400.00	0.06%	GRP	WTL-1 near MH CC-004				
CC-005	112+50.00	256.40	6.00		236.06		262	CC-006	236.31	400.00	0.06%	GRP					
CC-006	116+50.00	255.58	6.00		236.31		262	CC-007	236.55	400.00	0.06%	GRP					
CC-007	120+50.00	253.39	5.00		236.55		263	CC-008	236.76	350.00	0.06%	GRP	WWC-1				
CC-008	124+00.00	253.69	5.00		236.76		263	CC-009	237.00	400.00	0.06%	GRP	WWC-2				
CC-009	128+00.00	253.57	5.00		237.00		263	CC-010	237.18	300.00	0.06%	GRP					
CC-010	131+00.00	254.26	5.00		237.18		263	CC-011	237.33	250.00	0.06%	GRP	Texas Gas Pipelines Crossing				
CC-011	133+50.00	254.74	5.00		237.33		263	CC-012	237.54	225.00	0.09%	GRP					
CC-012	135+75.00	256.23	5.00		237.54		263	CC-013	237.61	75.00	0.09%	GRP	STR-1				
CC-013	136+50.00	255.97	5.00		237.61		263	CC-014	237.78	175.00	0.09%	GRP	WWC-3				
CC-014	138+25.00	255.03	5.00		237.78		263	CC-015	238.14	380.14	0.09%	GRP					
CC-015	142+05.14	253.96	7.00		238.24		263	CC-016	239.84	160.00	1.00%	DIP	CSX RR - Bored Crossing - Use DIP				
CC-016	143+65.14	257.54	7.00		239.94	241.18	263	CC-017	240.21	334.86	0.08%	GRP	24" Sewer				
CC-017	147+00.00	257.06	5.00		240.31		263	CC-018	240.61	370.00	0.08%	GRP	WTL-2				
CC-018	150+70.00	256.33	5.00		240.61		263	CC-019	241.23	650.00	0.095%	GRP	WTL-2				
CC-019	157+20.00	256.28	5.00		241.33		263	CC-020	241.65	400.00	0.08%	GRP					
CC-020	161+20.00	256.67	5.00		241.75		262	CC-021	242.08	400.00	0.08%	GRP					
CC-021	165+20.00	261.39	6.00		242.08		262	CC-022	242.38	380.00	0.08%	GRP	Evergreen Road				
CC-022	169+00.00	266.26	6.00		242.38		267.3	CC-023	242.70	400.00	0.08%	DIP	Use DIP				
CC-023	173+00.00	260.83	5.00		242.70		266	CC-024	243.03	400.00	0.08%	GRP	WTL-3				
CC-024	177+00.00	257.87	5.00		243.03		266	CC-025	243.20	216.53	0.08%	GRP	STR-2				
CC-025	179+16.53	257.77	7.00	yes	243.30	247.80	266	CC-026	243.61	383.47	0.08%	GRP	10" Sewer - Internal Drop MH				
CC-026	183+00.00	258.56	5.00		243.61		267	CC-027	243.93	400.00	0.08%	GRP					
CC-027	187+00.00	258.56	5.00		243.93		267	CC-028	244.26	400.00	0.08%	GRP					
CC-028	191+00.00	259.27	5.00		244.26		267	CC-029	244.46	250.00	0.08%	GRP					
CC-029	193+50.00	259.39	5.00		244.46		267	CC-029.5	244.66	253.26	0.08%	GRP					
CC-029.5	196+03.26	259.82	6.00		244.76		267	CC-30	245.08	396.74	0.08%	GRP	WWC-5				
CC-030	200+00.00	262.14	5.00		245.18		267	CC-031	245.31	165.27	0.08%	DIP	Use DIP				
CC-031	201+65.27	269.71	6.00		245.41		270.7	CC-032	245.74	300.08	0.11%	GRP	MLGW Elec Substation- Bored Crossing				
CC-032	204+65.35	261.45	5.00		245.84		none	CC-033	246.07	261.33	0.09%	GRP					
CC-033	207+26.68	260.27	5.00		246.07		none	CC-034	246.29	274.83	0.08%	GRP					
CC-034	210+01.51	263.69	5.00		246.39		268	CC-035	246.49	122.84	0.08%	GRP	US 70 - BORED CROSSING				
CC-035	211+24.35	267.50	5.00		246.59		268.5	CC-036	246.90	383.92	0.08%	GRP					
CC-036	215+08.27	263.91	6.00		247.00		268	CC-037	247.19	243.42	0.08%	GRP					
CC-037	217+51.69	263.80	5.00		247.29		268	CC-038	247.49	246.10	0.08%	GRP					
CC-038	219+97.79	263.12	6.00		247.59		268	CC-039	247.89	373.88	0.08%	GRP					
CC-039	223+71.67	261.26	5.00		247.89		268	CC-040	248.22	400.00	0.08%	GRP	WTL-4				
CC-040	227+71.67	261.87	6.00		248.32	251.82	268	CC-041	248.49	217.42	0.08%	GRP	6" Service Connection				
CC-041	229+89.09	262.61	6.00		248.59		268	CC-042	248.94	436.15	0.08%	GRP	WTL-5				
CC-042	234+25.24	262.53	5.00		248.94	252.44	269	CC-043	249.19	309.96	0.08%	GRP	6" Service Connection				
CC-043	237+35.20	263.50	5.00		249.29		269	CC-044	249.41	148.70	0.08%	GRP	Memphis Arlington Rd - STR-3				
CC-044	238+83.90	263.57	7.00		249.51		269	CC-045	249.86	435.00	0.08%	GRP	MLGW & TVA Easements				
CC-045	243+18.90	263.81	7.00		249.96		269	CC-046	250.29	406.34	0.08%	GRP	TVA Easement & WTL-6				
CC-046	247+25.24	264.01	5.00		250.29		269	CC-047	250.61	400.00	0.08%	GRP	TVA Easement				
CC-047	251+25.24	269.70	5.00		250.61		270.7	CC-048	250.93	393.66	0.08%	GRP	TVA Easement				
CC-048	255+18.90	272.87	5.00		251.03		273.9	CC-049	251.30	331.09	0.08%	GRP	TVA Easement				
CC-049	258+49.99	270.82	5.00		251.40		271.8	CC-050	251.55	189.76	0.08%	GRP	TVA Easement & STR-4				
CC-050	260+39.75	271.22	6.00	yes	251.65	253.65	272.2			10.00	0.08%	GRP	18" Sewer and 42" Continuation Stub				

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42"
SANITARY SEWER
DATA

DRAWING NO.
G-005

SHEET 5 OF 87

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24 INCH SANITARY SEWER DATA

DOWNSTREAM (DS) STUCTURE DATA								UPSTREAM (UP) STRUCTURE DATA		PIPE DATA				AS-BUILT DATA			
DS MH ID	Station	Rim Elev DS MH	Lined	MH DIA	Invert In DS MH	Secondary Invert in	Gooseneck opening elev.	UP MH ID	Invert out UP MH	Pipe Length	Slope	Pipe Material	Notes	Invert In DS MH	Invert out UP MH	Pipe Length	Slope
CC-016	600+00.00	257.54		7.00	241.18	239.68 (42")	263	CC-016.1	243.42	202.68	1.10%	GRP	Connection to 42" Interceptor STR-1.1				
CC-016.1	602+02.68	258.69	yes	5.00	250.68(15")	251.27 (18")	262						Provide drop connection for 15" pipe. Reconnect existing 18" sewer at existing invert and secure with in-pipe duckbill valve				

18 INCH SANITARY SEWER DATA

DOWNSTREAM (DS) STUCTURE DATA								UPSTREAM (UP) STRUCTURE DATA		PIPE DATA				AS-BUILT DATA			
DS MH ID	Station	Rim Elev DS MH	Lined	MH DIA	Invert In DS MH	Secondary Invert in	Gooseneck opening elev.	UP MH ID	Invert out UP MH	Pipe Length	Slope	Pipe Material	Notes	Invert In DS MH	Invert out UP MH	Pipe Length	Slope
CC-050	0+00	271.22	yes	6.00	253.65	251.65(42")	272.2	CC-050.1	257.00	390.06	0.86%	PVC/GRP	Connection to 42" Interceptor MLGW & TVA Easements & STR-4.1				
CC-050.1	3+90.06	273.48		4.00	257.10		274.5	CC-050.2	258.70	133.62	1.20%	PVC/GRP					
CC-050.2	5+23.68	272.88		4.00	258.80		none	CC-050.3	260.40	398.97	0.40%	PVC/GRP	Parcels 17, 25, 26 - Sewer Laterals - 8% slope Parcel 18 Deep Sewer Lateral - 8% slope				
CC-050.3	9+22.65	275.53		4.00	260.50		none	CC-050.4	262.10	400.00	0.40%	PVC/GRP	Parcels 19, 20, 27, 28 - Sewer Laterals - 8% slope				
CC-050.4	13+22.65	276.80		4.00	262.20		none	CC-050.45	262.58	294.35	0.13%	PVC/GRP	Parcels 21, 29 - Sewer Laterals - 8% slope				
CC-050.45	16+17.00	279.48	yes	5.00	262.68	Parcel 22 - 272 Parcel 30 - 268.6	none	CC-050.5	262.92	183.00	0.13%	PVC/GRP	Connect to MH (inside drop / bowl) Parcel 22 - 8% slope Parcel 30 - 2% slope				
CC-050.5	18+00.00	283.00	yes	5.00	263.02	Parcel 23 - 274.14 Parcel 31 - 269	none	CC-050.6	263.41	300.00	0.13%	PVC/GRP	Connect to MH (inside drop / bowl) Parcel 23 - 8% slope Parcel 31 - 2% slope Parcel 32 - Deep Sewer Lateral - 8% Slope				
CC-050.6	21+00.00	285.94	yes	5.00	263.51	Parcel 24 - 276 Parcel 33 - 273.9	none	CC-050.7	263.72	161.28	0.13%	PVC/GRP	Connect to MH (inside drop / bowl) Parcel 24 - 8% slope Parcel 33 - 2% slope				
CC-050.7	22+61.28	285.10		5.00	263.82		none	CC-050.8	264.21	297.96	0.13%	PVC/GRP					
CC-050.8	25+59.24	284.86		4.00	264.31		none	CC-050.9	264.77	350.00	0.13%	PVC/GRP					
CC-050.9	29+09.24	284.98	yes	5.00	264.87	Parcel 36 - 276 Parcel 37 - 273	none	CC-050.10	265.17	234.90	0.13%	PVC/GRP	Connect to MH (inside drop / bowl) Parcel 36, 37 - 2% slope				
CC-050.10	31+44.14	284.88	yes	5.00	265.27	Parcel 38 - 274	none	CC-050.11	265.77	384.13	0.13%	PVC/GRP	Connect to MH (inside drop / bowl) Parcel 38 - 2% slope				
CC-050.11	35+28.27	285.29		4.00	265.87		none	CC-050.12	266.37	384.10	0.13%	PVC/GRP					
CC-050.12	39+12.37	284.85	yes	4.00	266.47	267.14 (10")	none	CC-050.5					10" sewer and 18" continuation stub				

10 INCH SANITARY SEWER DATA

DOWNSTREAM (DS) STUCTURE DATA								UPSTREAM (UP) STRUCTURE DATA		PIPE DATA				AS-BUILT DATA			
DS MH ID	Station	Rim Elev DS MH	Lined	MH DIA	Invert In DS MH	Secondary Invert In	Gooseneck opening elev.	UP MH ID	Invert out UP MH	Pipe Length	Slope	Pipe Material	Notes	Invert In DS MH	Invert out UP MH	Pipe Length	Slope
CC-025	500+00.00	257.68	yes	7.00	247.80	243.30 (42")	266	CC-025.1	249.50	223.00	0.76%	PVC	Provide inside drop bowl for 10" sewer				
CC-025.1	502+22.77	259.54		4.00	249.60		264	CC-025.2	251.76	338.47	0.64%	PVC					
CC-025.2	505+61.24	260.93		4.00	251.86		266	CC-025.3	254.02	300.00	0.72%	PVC					
CC-025.3	508+61.24	262.62		4.00	254.12		266	CC-025.4	258.76	400.00	1.16%	PVC					
CC-025.4	512+61.24	269.53	yes	5.00	258.23		270.6						Convert Creekside Manor wetwell to MH				
CC-050.12	400+00.00	284.85	yes	4.00	267.14	266.47 (18")	none	CC-050.12.1	268.10	90.41	1.06%	PVC	Connect to 18" Sewer				
CC-050.12.1	400+90.41	284.78		4.00	268.20		none	CC-050.12.2	269.00	159.29	0.50%	PVC	Tie in to 10" stub at Sta 402+09.70				
CC-050.12.2	402+49.70	286.00	yes	8.00	269.47		287						Convert Oakwood Grove wetwell to MH				

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

STATE OF TENNESSEE — DAVID VERDELL BUCHART — REGISTERED ENGINEER — 103538 — 03/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

DATE | BY | REVISION | NO.

PROJECT NO.: 77202-00
CAD FILE: G-006.DWG
ENGR./ARCH.: DV
DESIGN BY: DV
DRAWN BY: DB
CHECKED BY: DV
DATE: 03/02/2021

24", 18" & 10" SANITARY SEWER DATA

DRAWING NO. G-006

SHEET 6 OF 87

NOTES:

1. BOTH GAS AND WATER SERVICE LINES CROSS UNDER THE ROADWAY TO BE FIELD LOCATED AND PROTECTED. ELECTRIC CROSSES THE ROADWAY OVERHEAD. CONTRACTOR TO COORDINATE WITH UTILITY AND PROPERTY OWNER DURING CONSTRUCTION. REFER TO UTILITIES UNDER GENERAL NOTES SHEET G–003.

2. CONTRACTOR TO REPLACE ALL DRIVEWAYS DAMAGED BY CONSTRUCTION TO NEAREST CONSTRUCTION JOINT MATCHING EXISTING MATERIAL. IF ASPHALT DRIVEWAY, REPLACE A MINIMUM OF 20 LF AND ENTIRE WIDTH. SAW CUT AT EDGE.

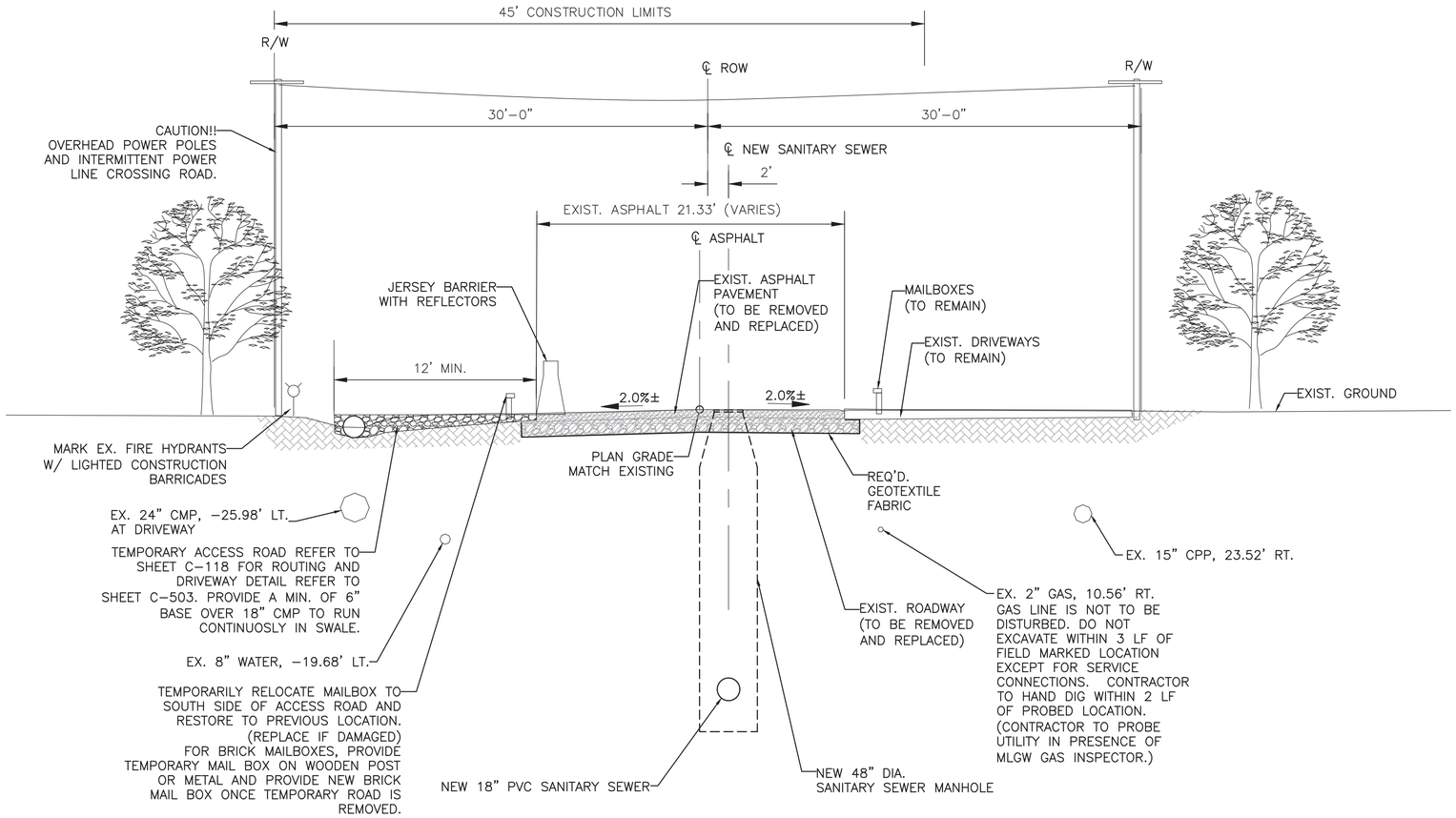
3. TEMPORARY ACCESS DRIVE INTENDED FOR LOCAL TRAFFIC ONLY. AS CONSTRUCTION IS COMPLETED, CONTRACTOR TO RESTORE PROPERTY AND DITCH TO PREVIOUS GRADE AND SOD PER CITY OF LAKELAND SPECIFICATION.

4. ROAD IS INTENDED FOR FULL WIDTH OVERLAY. REFER TO TYPICAL PAVEMENT REPAIR DETAIL (C–502) AND EXISTING ROAD CROSS SECTIONS. PROVIDE 2%± SLOPE.

5. CONTRACTOR TO PROTECT FROM DAMAGE AND CLOGGING ANY DRAINPIPES THAT DAYLIGHT IN DRAINAGE SWALES. CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS TO IDENTIFY KNOWN DRAIN PIPE, INVISIBLE FENCE, AND IRRIGATION SYSTEM LOCATIONS PRIOR TO INSTALLATION OF SERVICE CONNECTIONS.

6. JERSEY BARRIERS TO BE PLACED WITH A GAP AT ALL FIRE HYDRANTS TO ALLOW HOSE ACCESS BY THE FIRE DEPARTMENT.

7. CONTRACTOR TO STAKE OUT THE LOCATION OF ALL LATERALS AT A MINIMUM OF TWO WEEKS PRIOR TO INSTALLATION.



A / C–001

CHAPEL HILL ROAD
STA. 9+45.11
(LOOKING WEST)

NTS

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VERDOLA — REGISTERED ENGINEER — STATE OF FLORIDA — 7/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–001.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

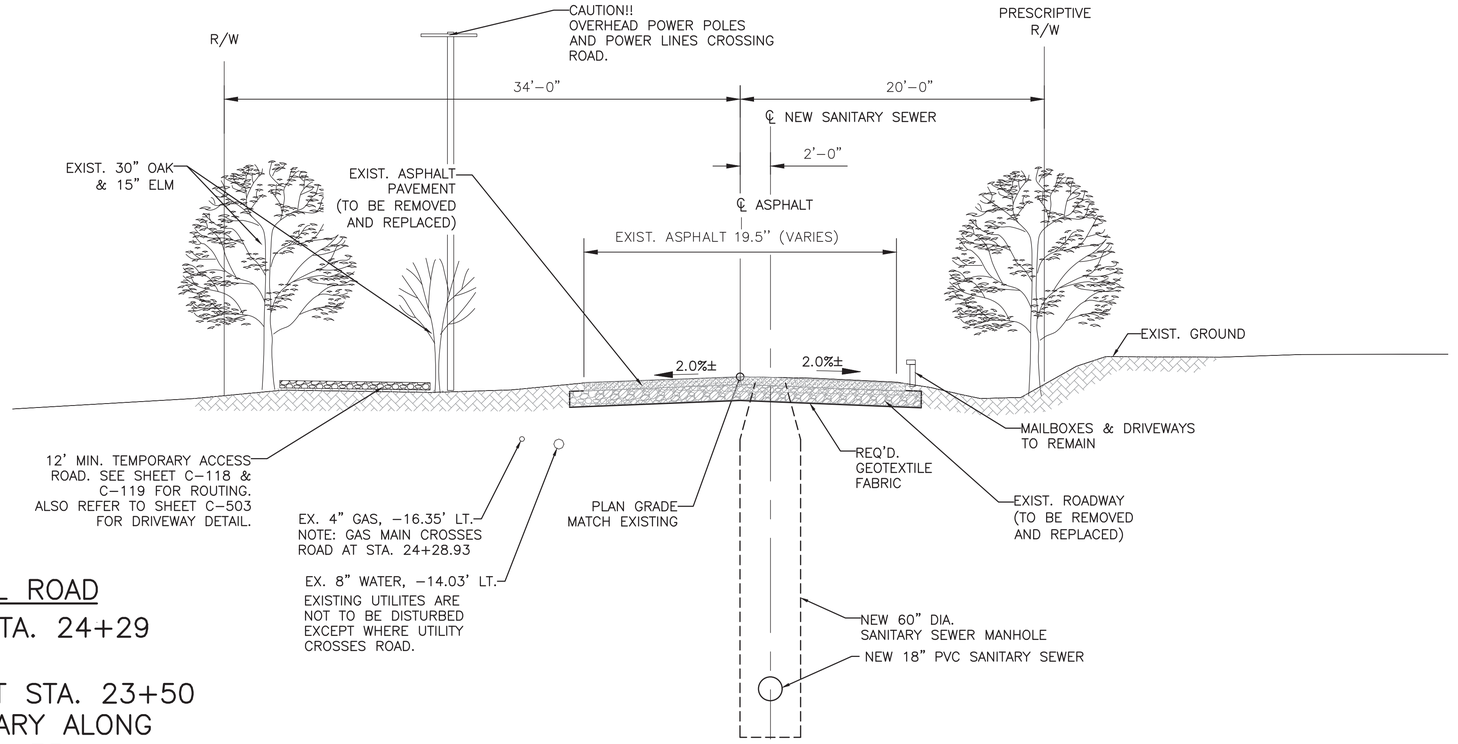
TYPICAL SECTION CHAPEL HILL ROAD

DRAWING NO. C–001

SHEET 7 OF 87

NOTES:

1. BOTH GAS AND WATER SERVICE LINES CROSS UNDER THE ROADWAY TO BE FIELD LOCATED AND PROTECTED. ELECTRIC CROSSES THE ROADWAY OVERHEAD. CONTRACTOR TO COORDINATE WITH UTILITY AND PROPERTY OWNER DURING CONSTRUCTION. REFER TO UTILITIES UNDER GENERAL NOTES SHEET G–003.
2. CONTRACTOR TO REPLACE ALL DRIVEWAYS DAMAGED BY CONSTRUCTION TO NEAREST CONSTRUCTION JOINT MATCHING EXISTING MATERIAL. IF ASPHALT DRIVEWAY, REPLACE A MINIMUM OF 20 LF AND ENTIRE WIDTH. SAW CUT AT EDGE.
3. TEMPORARY ACCESS DRIVE INTENDED FOR LOCAL TRAFFIC ONLY. AS CONSTRUCTION IS COMPLETED, CONTRACTOR TO RESTORE PROPERTY AND DITCH TO PREVIOUS GRADE AND SOD PER CITY OF LAKELAND SPECIFICATION.
4. ROAD IS INTENDED FOR FULL WIDTH OVERLAY. REFER TO TYPICAL PAVEMENT REPAIR DETAIL (C–502) AND EXISTING ROAD CROSS SECTIONS. PROVIDE 2%± SLOPE.
5. CONTRACTOR TO PROTECT FROM DAMAGE AND CLOGGING ANY DRAINPIPES THAT DAYLIGHT IN DRAINAGE SWALES. CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS TO IDENTIFY KNOWN DRAIN PIPE, INVISIBLE FENCE, AND IRRIGATION SYSTEM LOCATIONS PRIOR TO INSTALLATION OF SERVICE CONNECTIONS.
6. JERSEY BARRIERS TO BE PLACED WITH A GAP AT ALL FIRE HYDRANTS TO ALLOW HOSE ACCESS BY THE FIRE DEPARTMENT.
7. CONTRACTOR TO STAKE OUT THE LOCATION OF ALL LATERALS AT A MINIMUM OF TWO WEEKS PRIOR TO INSTALLATION.

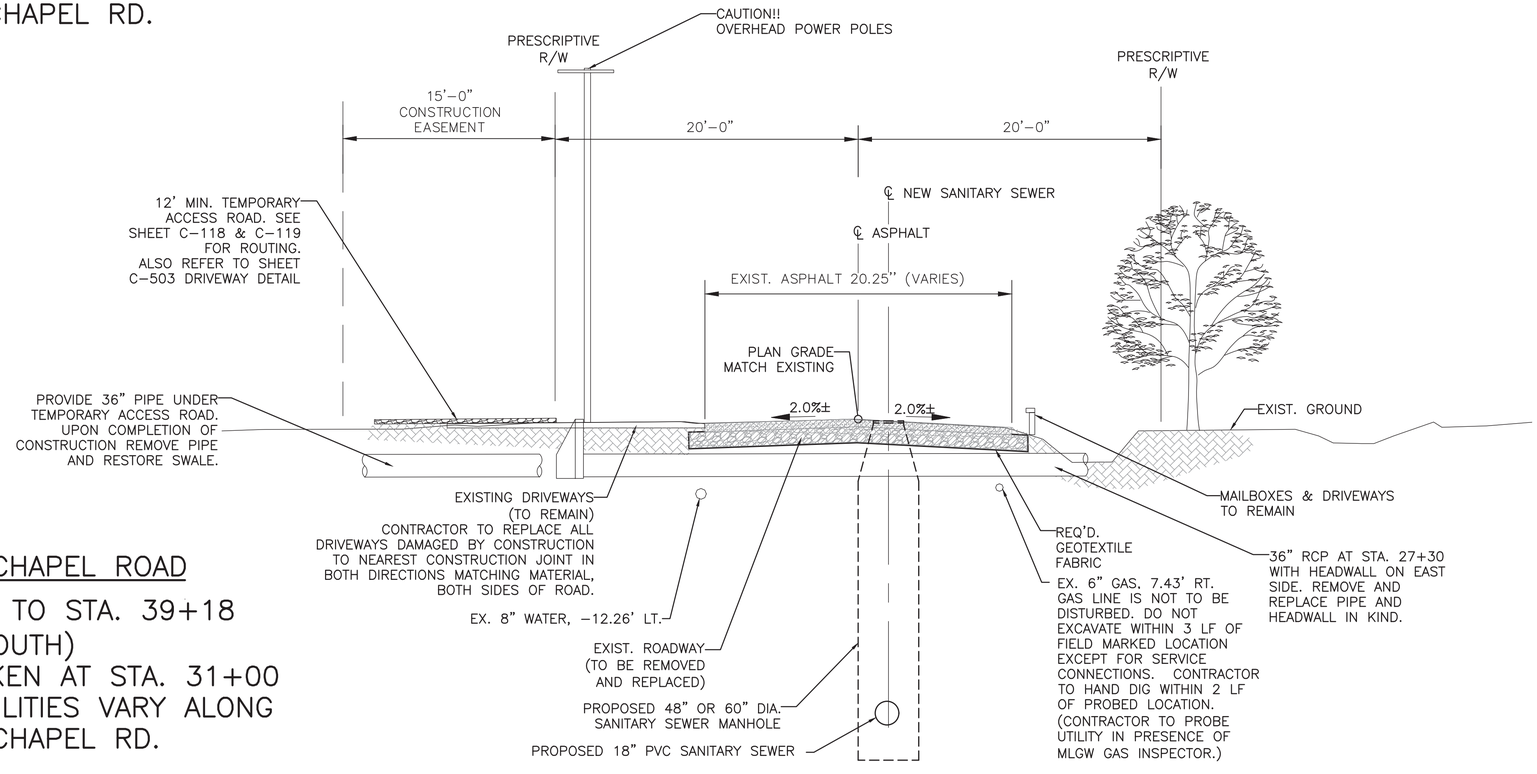


A C–002

CHAMBERS CHAPEL ROAD

STA. 22+56 TO STA. 24+29
(LOOKING SOUTH)
SECTION TAKEN AT STA. 23+50
EXIST. UTILITIES VARY ALONG CHAMBERS CHAPEL RD.

NTS



B C–002

CHAMBERS CHAPEL ROAD

STA. 24+29 TO STA. 39+18
(LOOKING SOUTH)
SECTION TAKEN AT STA. 31+00
EXISTING UTILITIES VARY ALONG CHAMBERS CHAPEL RD.

NTS

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–002.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

TYPICAL SECTION CHAMBERS CHAPEL ROAD

DRAWING NO. C–002

SHEET 8 OF 87

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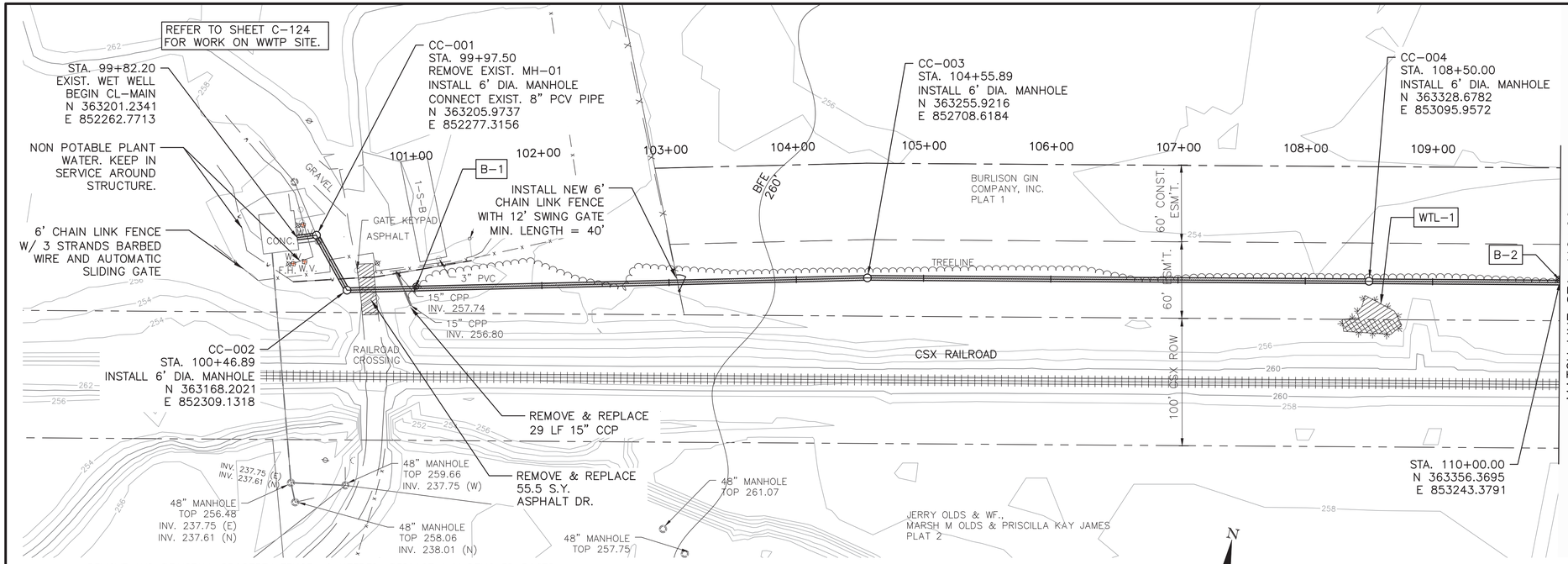


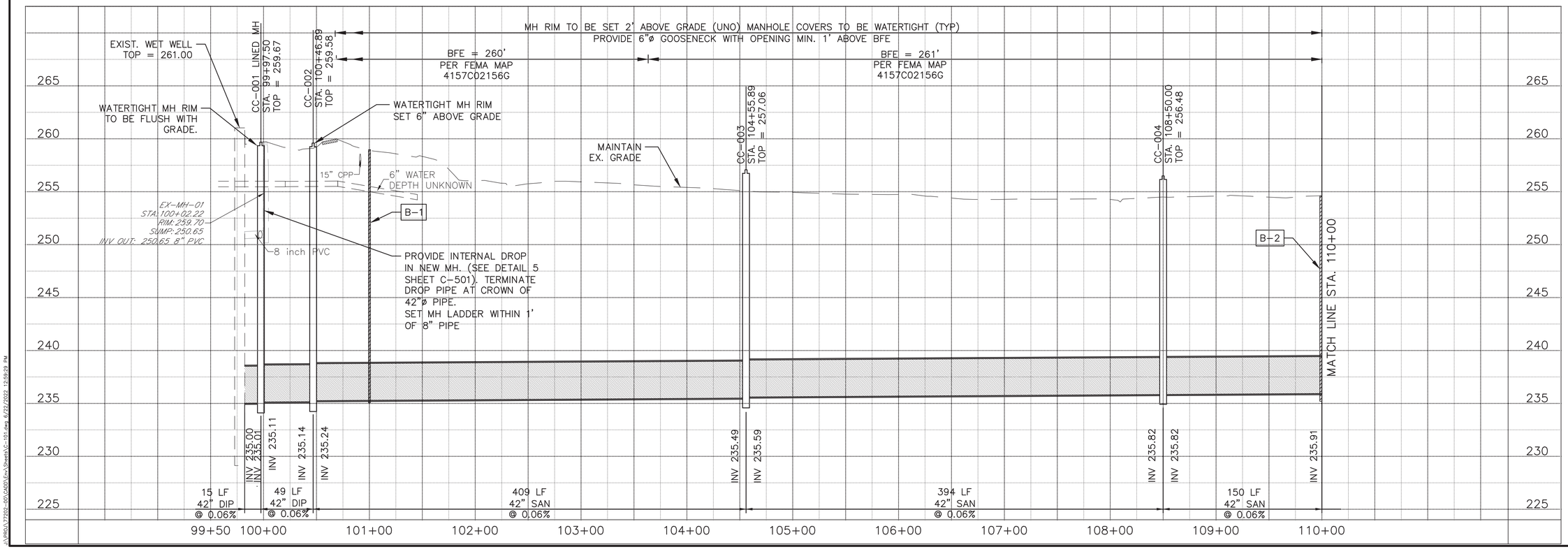
REMOVE AND REINSTALL PROPERTY FENCE AS NEEDED. REPLACE ANY REMOVED POSTS WITH NEW. REPLACE ANY SECTIONS DAMAGED DURING REMOVAL OR CONSTRUCTION WITH NEW. REMOVE AND REINSTALL EXISTING GATE OPERATOR AND ROLLING GATE. PROVIDE TEMPORARY FENCING (MIN 6 FEET) AROUND CONSTRUCTION WORK AREA AND EXTENDING TO REMAINING FENCE. PROVIDE TEMPORARY FENCING (MIN 6 FEET) IN PLACE OF THE ROLLING GATE TO BE SET IN PLACE DURING WEEKDAY NON-WORKING HOURS AND WEEKENDS. EXISTING FENCE TO BE REINSTALLED ONCE CONSTRUCTION ACROSS THE ACCESS DRIVEWAY IS COMPLETED.

1 / C-101

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE

*CONTRACTOR MAY STAGE EQUIPMENT TRAILER ON SOUTH SIDE OF RAILROAD TRACKS BY THE WWTP TO BRING EQUIPMENT OVER TO NORTH SIDE OF RAILROAD TRACKS.



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DAVID C. VESELY — REGISTERED ENGINEER — STATE OF FLORIDA — 7/18/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-101.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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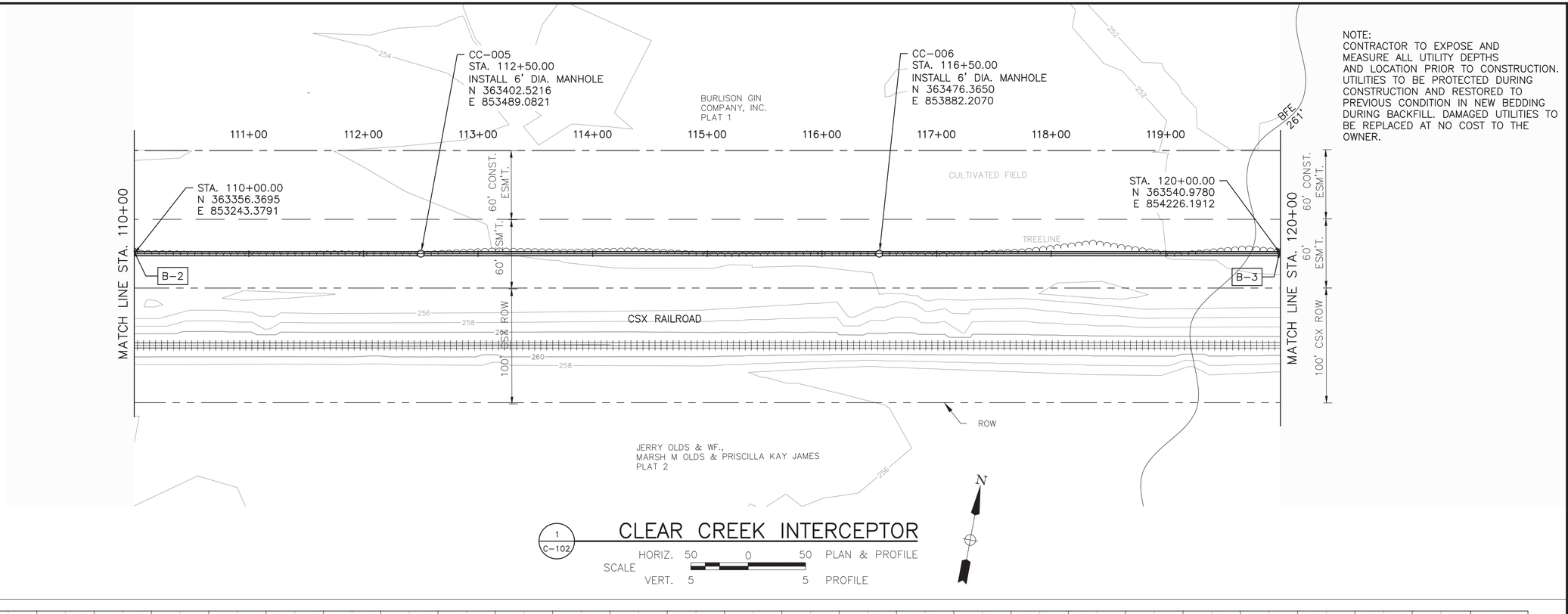
P&P

STA. 99+82.20
TO
STA. 110+00

DRAWING NO. C-101

SHEET 9 OF 87

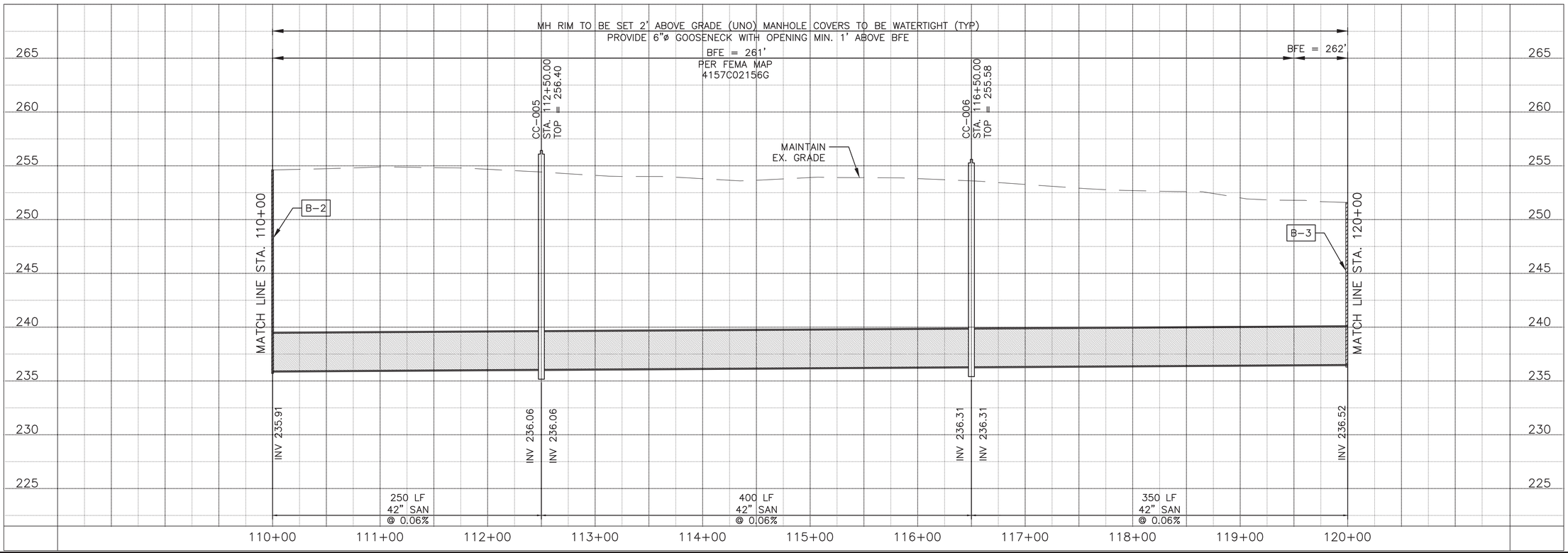


NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

1
C–102

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VESELY — LICENSED ENGINEER — No. 77202 — STATE OF FLORIDA — 3/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–102.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

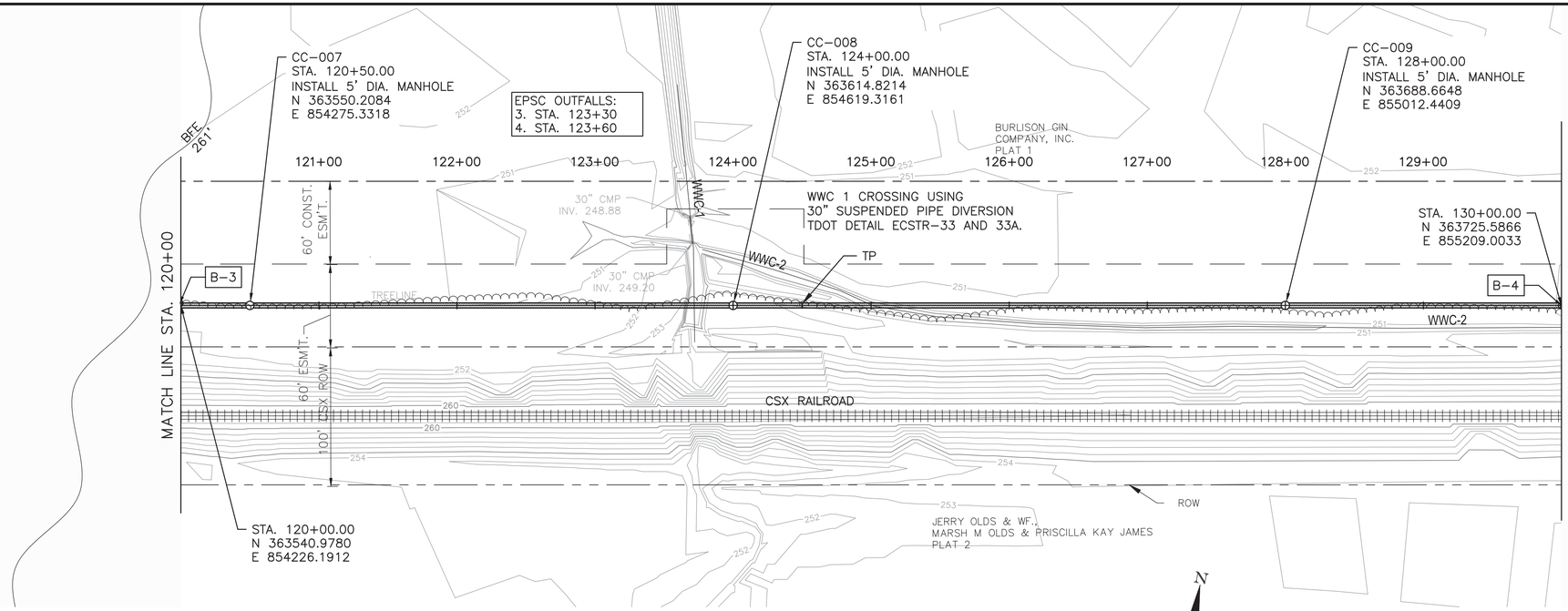
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 110+00
TO
STA. 120+00

DRAWING NO.
C–102

SHEET 10 OF 87

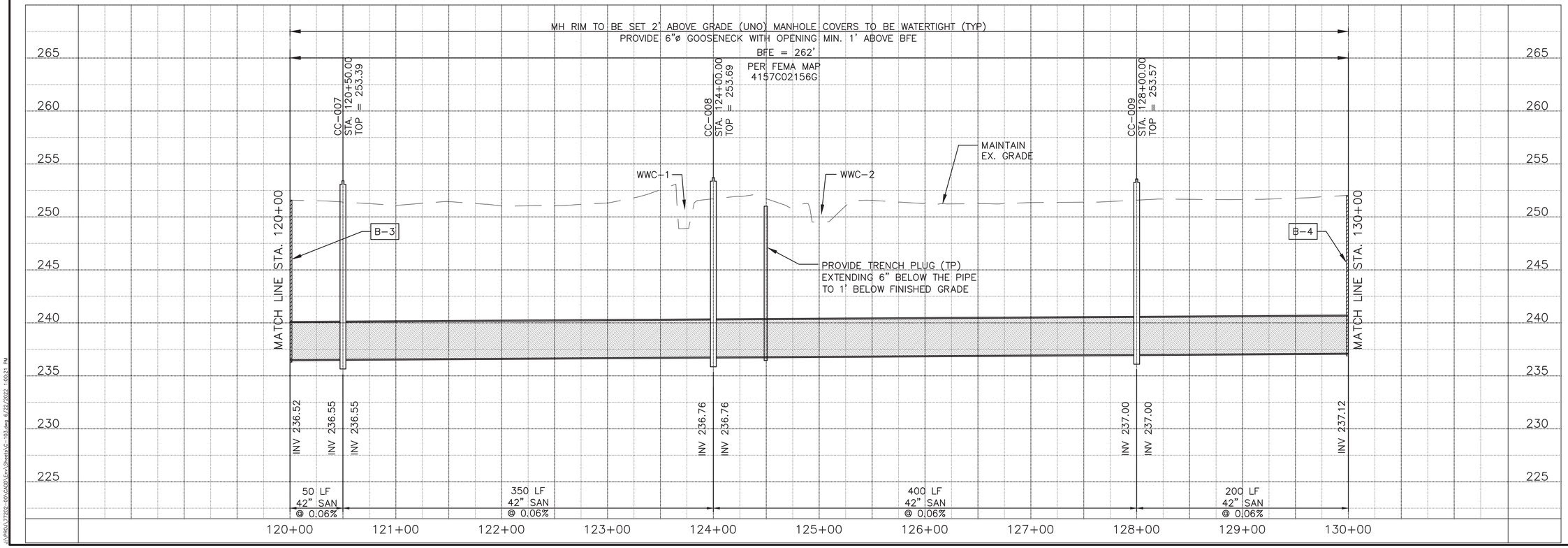


NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

1
C-103

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-103.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

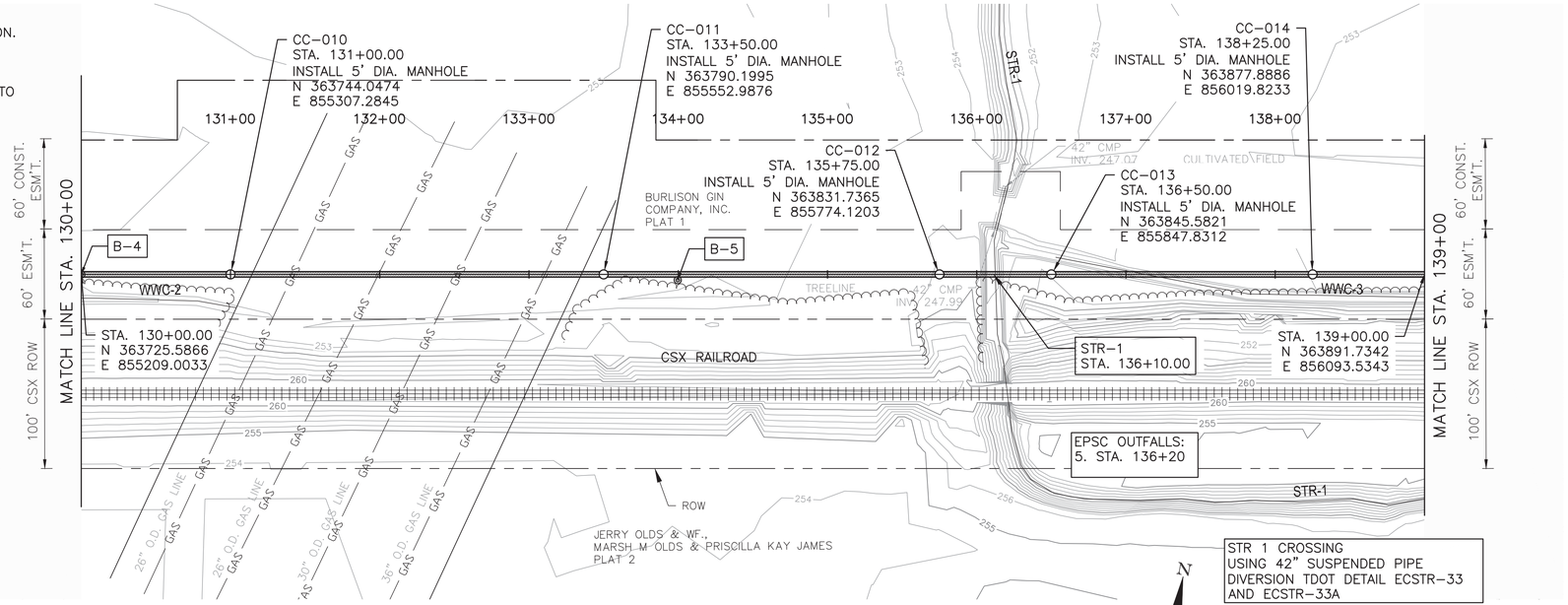
P&P

STA. 120+00
TO
STA. 130+00

DRAWING NO.
C-103

SHEET 11 OF 87

NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.



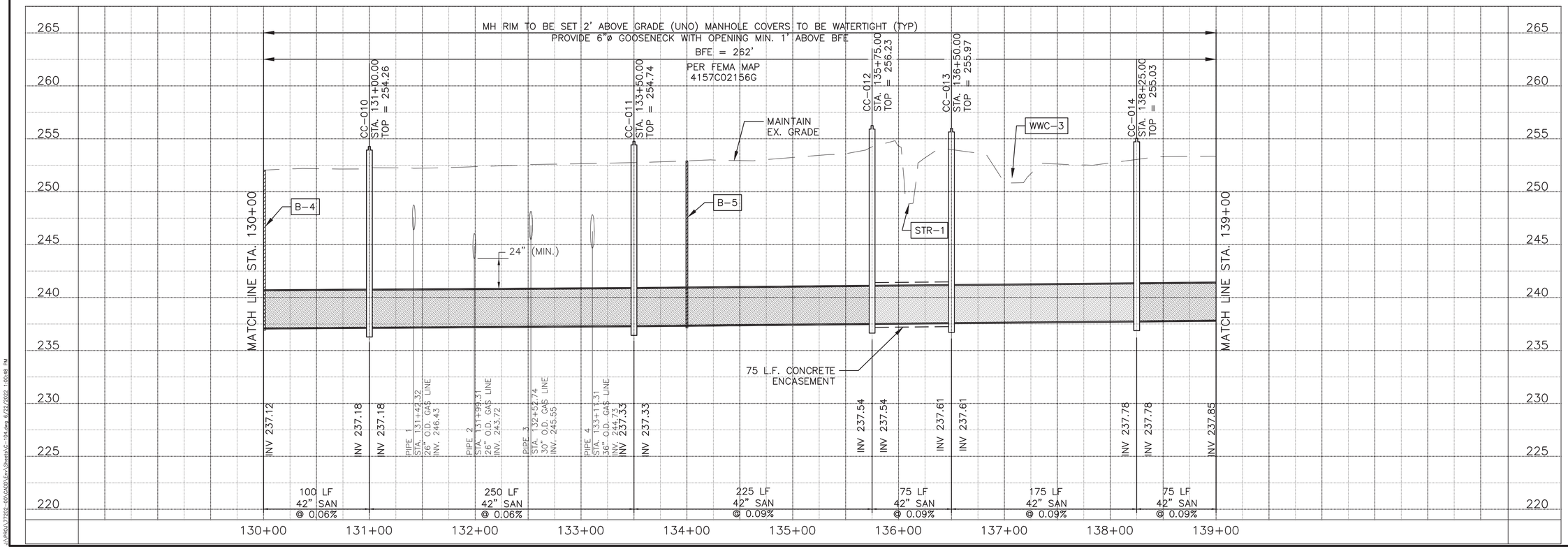
1
C-104

CLEAR CREEK INTERCEPTOR

HORIZ. 50 0 50 PLAN & PROFILE
SCALE
VERT. 5 5 PROFILE

CONSTRUCTION BETWEEN MH CC-010 & MH CC-011 REFERENCE TEXAS GAS AGREEMENT #8755

1. TEXAS GAS REPRESENTATIVE TO BE PRESENT FOR ALL CONSTRUCTION.
2. TEXAS GAS POC, JEFF HANKS 901-451-4178 jeffery.hanks@bwpipeline.com
3. PROVIDE MINIMUM TWO WEEK WRITTEN NOTICE TO TEXAS GAS AND CITY ENGINEER (WITH CONFIRMATION) PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES IN THIS AREA.
4. IN COORDINATION WITH TEXAS GAS REPRESENTATIVE EACH GAS PIPELINE WILL BE PROBED BY TEXAS GAS FOR EXACT LOCATION PRIOR TO COMMENCING CONSTRUCTION.
5. CONTRACTOR TO HAND EXCAVATE WITHIN 5 FT. OF EXISTING GAS PIPE IN ANY DIRECTION. FULLY EXPOSE GAS PIPE. ONCE EXPOSED, GAS PIPE IS TO BE HORIZONTALLY SUPPORTED. METHOD OF SUPPORT TO BE PRE APPROVED BY TEXAS GAS. THE CONTRACTOR MAY NOT USE THE TOP OF THE TRENCH BOX TO SUPPORT THE EXPOSED GAS PIPE.
6. SEWER TO BE INSTALLED WITH MIDPOINT OF PIPE DIRECTLY UNDER TEXAS GAS PIPELINE CROSSING.
7. MINIMUM SEPARATION BETWEEN GAS PIPE AND SEWER PIPE = 24 IN.
8. CONTRACTOR TO INSTALL TIMBER MATTING OR BRIDGED TIMBER MATTING AT ALL EQUIPMENT CROSSING POINTS OVER TEXAS GAS PIPELINES.



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-104.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 130+00
TO
STA. 139+00

DRAWING NO.
C-104

SHEET 12 OF 87

J:\PROJ\77202-00\Cad\Env\Sheets\C-104.dwg, 6/22/2022 1:00:48 PM

NOTES: REFERENCE FACILITY ENCROACHMENT AGREEMENT CSX 8877406

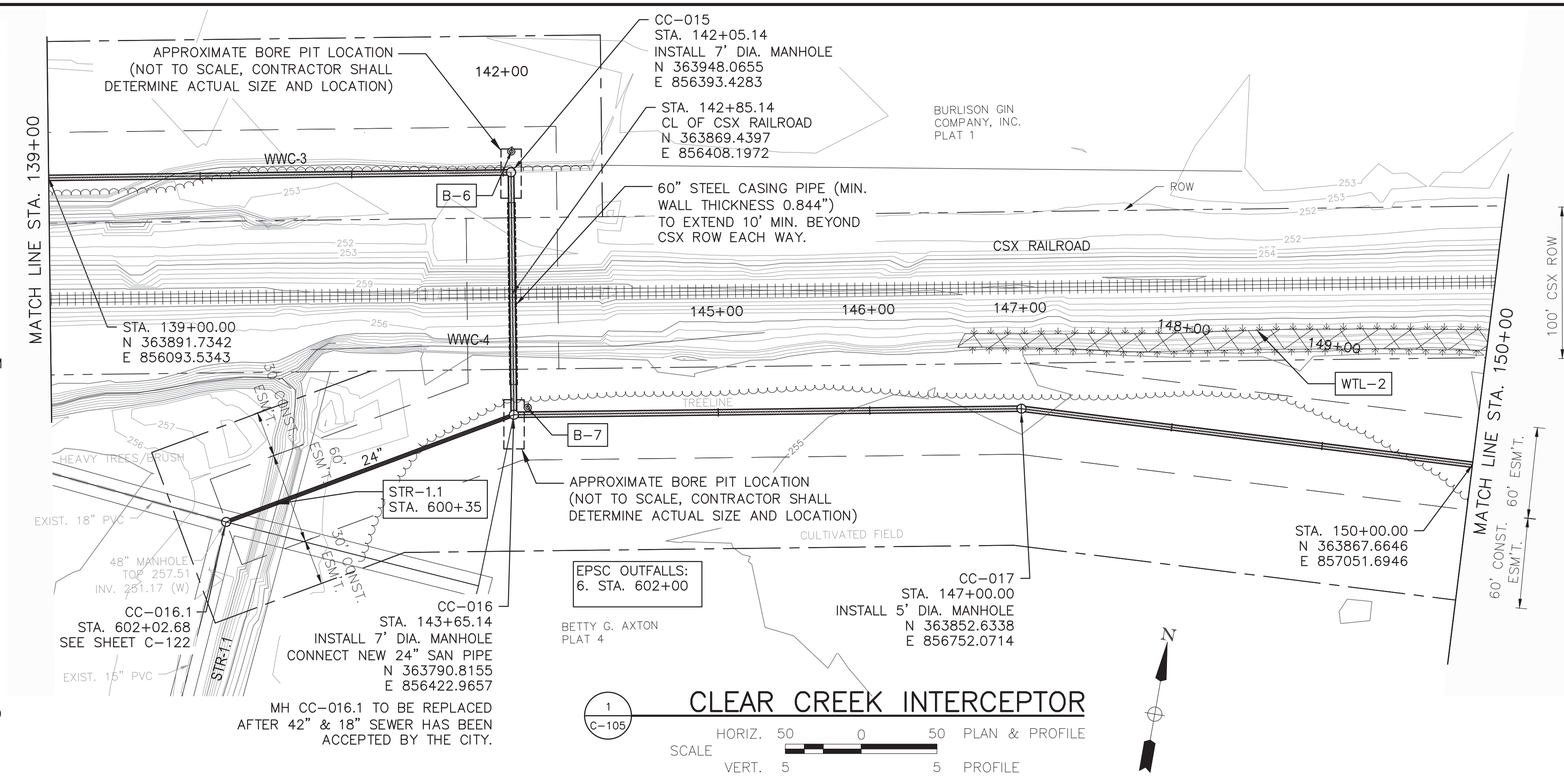
1. ALL WORK ON, OVER, UNDER OR WITHIN CSXT RIGHT OF WAY WILL BE PERFORMED IN ACCORDANCE WITH CSXT DESIGN AND CONSTRUCTION STANDARDS FOR PIPELINE OCCUPANCIES REVISED JUNE 5, 2018 OR LATER. (CSXT SPECS).
2. ALL CONTRATOR AND SUBCONTRACTOR EMPLOYEES WORKING ON OR AROUND THE CSXT ROW SHALL HAVE COMPLETED CSXT TRAINING AND WEAR ISSUED BADGES AT ALL TIMES.
3. THE CONTRACTOR SHALL REFERENCE AND FOLLOW CONSTRUCTION SUBMISSION CRITERIA FOR CONSTRUCTION SUBMITTAL REQUIREMENTS FOR ALL WORK WITHIN THE CSXT RIGHT OF WAY.
4. ONE CALL SERVICES DO NOT LOCATE BURIED RR SIGNAL AND COMMUNICATION LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD REPRESENTATIVE A MINIMUM OF (2 DAYS) PRIOR TO COMMENCING ANY CONSTRUCTION ASSOCIATED WITH THE PIPELINE CROSSING TO LOCATE BURIED RR LINES.
5. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE CITY AND CSXT THROUGH THE CSXT PORTAL A WORK PLAN FOR THE EXECUTION OF THE PIPELINE CROSSING INCLUDING BUT NOT LIMITED TO WORK SCHEDULE, SAFETY PLAN, MATERIALS, DEWATERING, BORE PITS WITH SHEETING IF USED FOR APPROVAL. THE CONTRACTOR SHALL ALLOW ADEQUATE TIME IN HIS SCHEDULE TO OBTAIN ALL APPROVALS PRIOR TO COMMENCING CONSTRUCTION WITHIN CXS RIGHT OF WAY AND THE ASSOCIATED BORE PIPES, SEWER AND MANHOLES.

5A. THE WORK PLAN WILL INCLUDE DESIGN PLANS AND COMPUTATIONS FOR THE LAUNCHING AND RECEIVING PITS SEALED BY A TN LICENSED PROFESSIONAL ENGINEER.

5B. A DEWATERING PLAN IS TO BE INCLUDED WITH THE WORK PLAN. PUMPS OF SUFFICIENT CAPACITY TO HANDLE THE FLOW SHALL BE MAINTAINED AT THE SITE. FOR THE DURATION OF THE PROJECT.

5C A PROCESS FOR MONITORING TRACK SETTLEMENT MUST BE PUT IN PLACE. BASELINE TRACK ELEVATIONS SHALL BE TAKEN PRIOR TO START OF CONSTRUCTION AND DAILY DURING THE OPERTAION IN THE MORNING

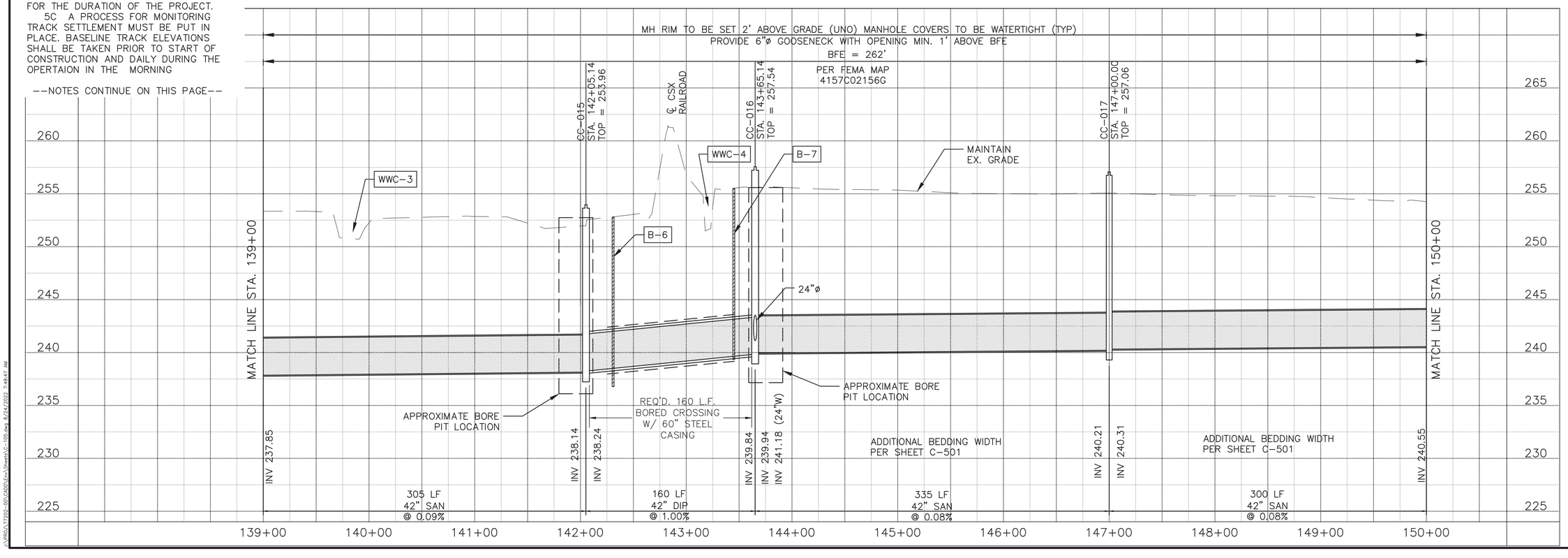
--NOTES CONTINUE ON THIS PAGE--



1 / C-105

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



NOTES CONTINUES:

NOON AND CHANGE OF SHIFT. NOTIFY CSXT IMMEDIATELY IF ANY MOVEMENT HAS OCCURED. CSXT WILL HAVE THE RIGHT AT ITS SOLE DISCRETION TO REQUIRE CONTRACTOR TO IMMEDIATELY CEASE OPERATIONS AND BACKFILL THE EXCAVATED AREA OR IMPLEMENT OTHER CORRECTIVE ACTION.
6. THE BORING OPERATION SHALL BE PROGRESSED ON A 24-HOUR BASIS WITHOUT STOPAGE UNTIL THE LEADING EDGE HAS REACHED THE RECEIVING PIT. PLANS AND DESCRITION OF JACKING AND BORING MUST ALSO BE SUBMITTED TO CSXT.
7. ALL HOLES OR VOIDS BETWEEN THE CASING PIPE AND UNDISTURBED EARTH ARE TO BE FILLED WITH GROUT.
8. FILL THE ANULAR SPACE BETWEEN THE CARRIER PIPE AND CASING PIPE WITH SAND.
TIMBER SKIDS TO BE CREOSOTED, SIZED, AND CUT TO FIT.
9. PIPELINE TO BE MARKED BY DURABLE WEATHERPROOF (METAL) SIGN AT CSX RIGHT OF WAY BOTH SIDES PER CSXT PIPELINE.

NOTE:

1. CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DAVID C. VERSELY
REGISTERED ENGINEER
STATE OF TENNESSEE
08/25/2021

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-105.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DMB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

P&P

STA. 139+00
TO
STA. 150+00

DRAWING NO.
C-105

SHEET 13 OF 87

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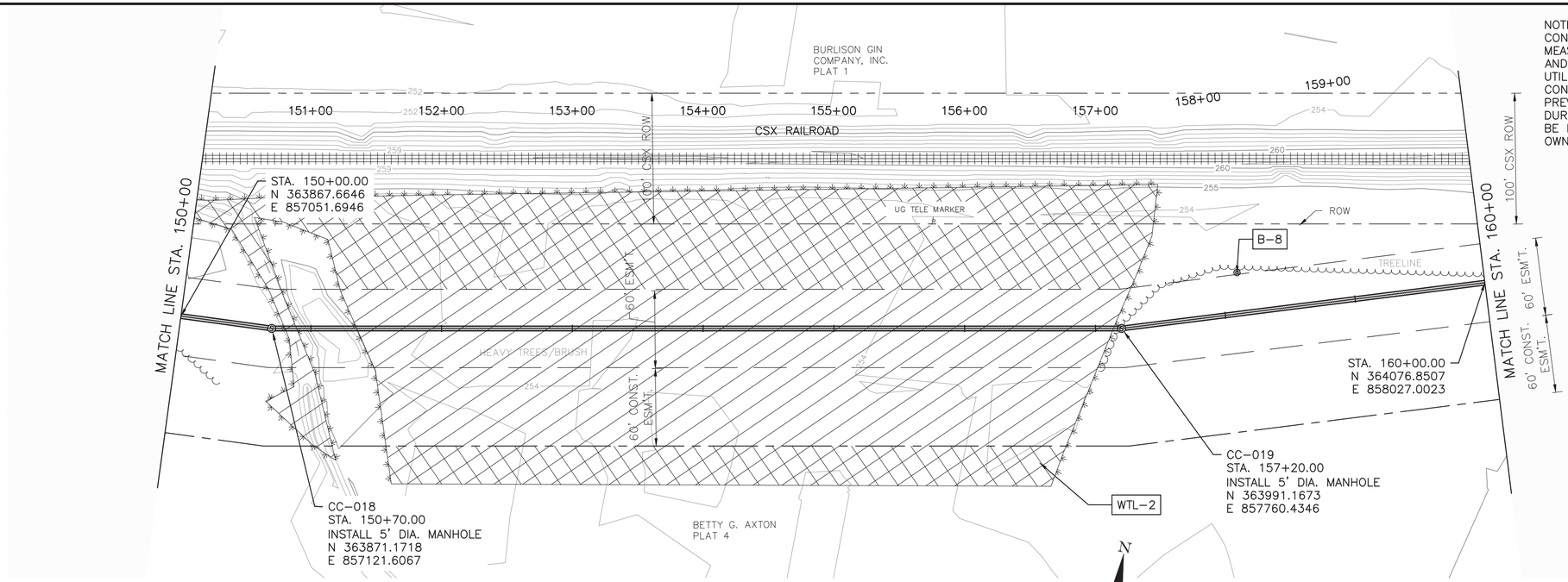


1 / C-106

CLEAR CREEK INTERCEPTOR

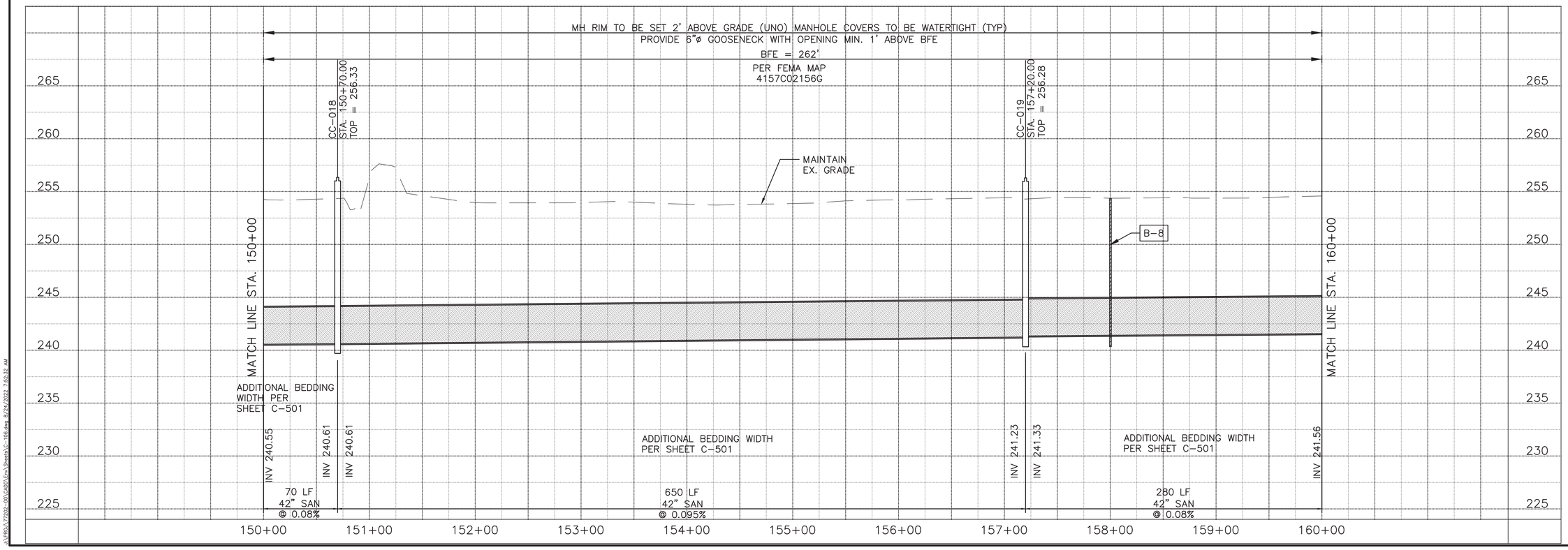
SCALE HORIZ. 50 0 50 PLAN & PROFILE
SCALE VERT. 5 5 PROFILE

NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

WTL-2
TOTAL = 1.585 AC.
IN EASEMENT

REFER TO EPSC PLANS FOR WETLAND STOCKPILE LOCATIONS.

EPSC OUTFALLS:
7. STA. 151+50



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DIANA C. VESELY — REGISTERED ENGINEER — STATE OF TENNESSEE
08/25/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-106.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

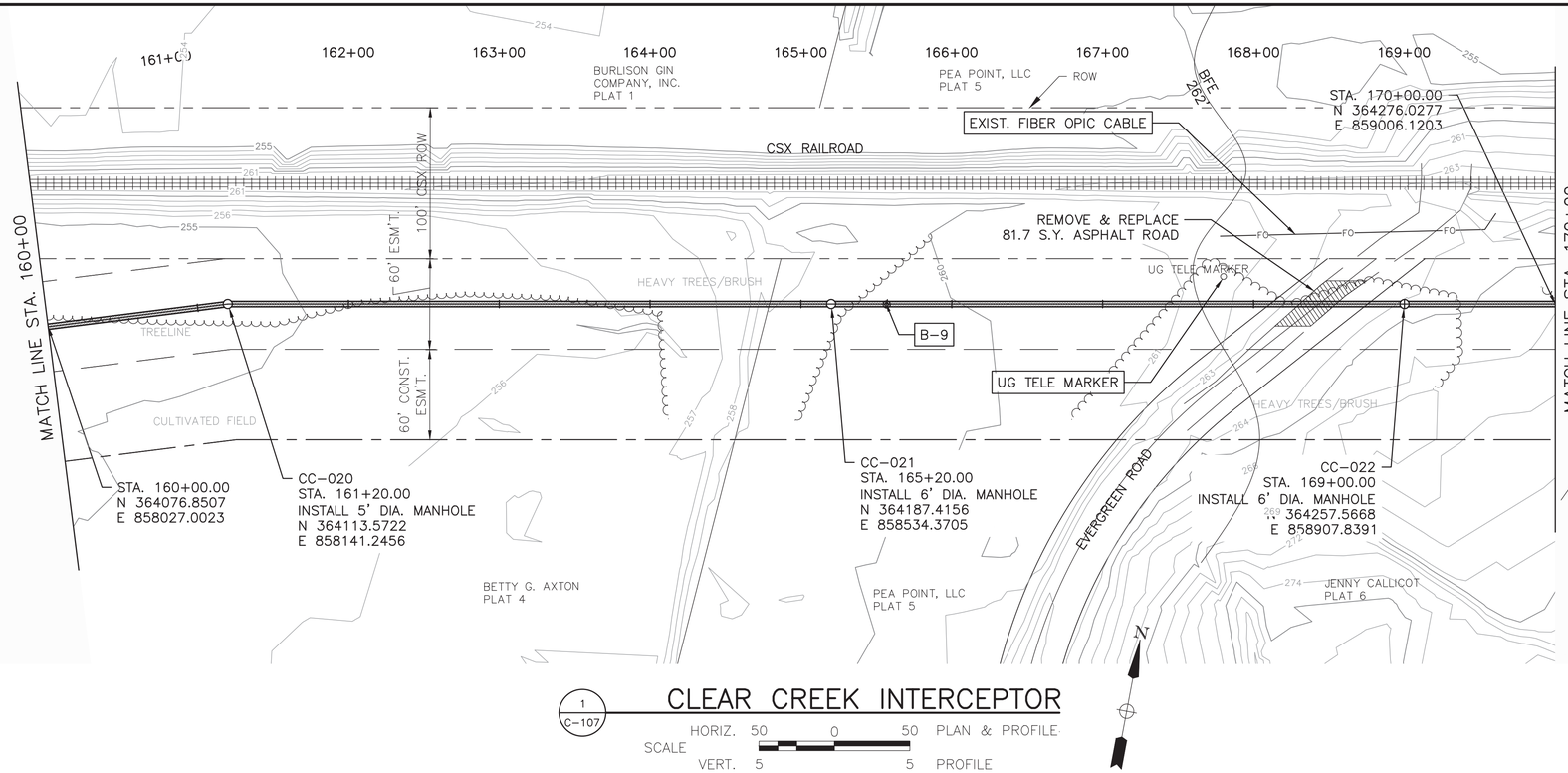
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 150+00
TO
STA. 160+00

DRAWING NO.
C-106

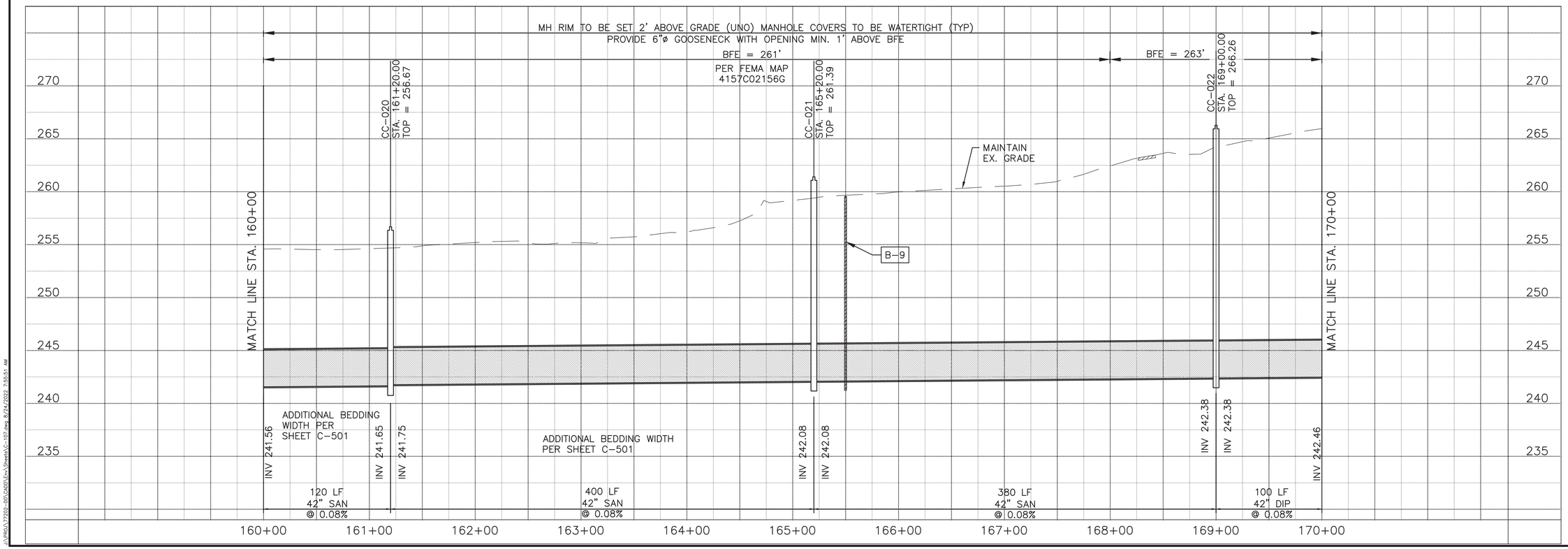
SHEET 14 OF 87



1
C-107

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

NOTE:
CONTRACTOR TO SUBMIT TRAFFIC CONTROL PLAN TO CITY OF LAKELAND FOR APPROVAL MIN. 1 MONTH PRIOR TO CONSTRUCTION ACROSS EVERGREEN ROAD.

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DAVID C. VESSELY — REGISTERED ENGINEER — STATE OF TENNESSEE — 102... — 08/25/2021

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-107.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 160+00
TO
STA. 170+00

DRAWING NO.
C-107

SHEET 15 OF 87

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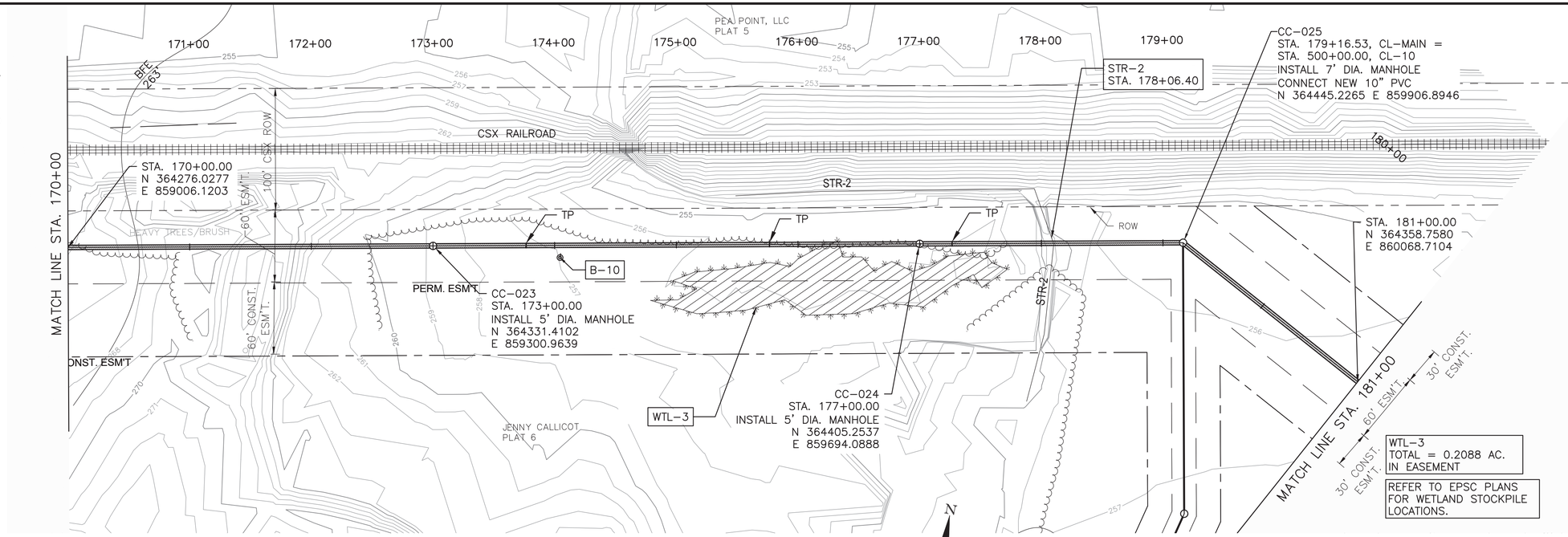
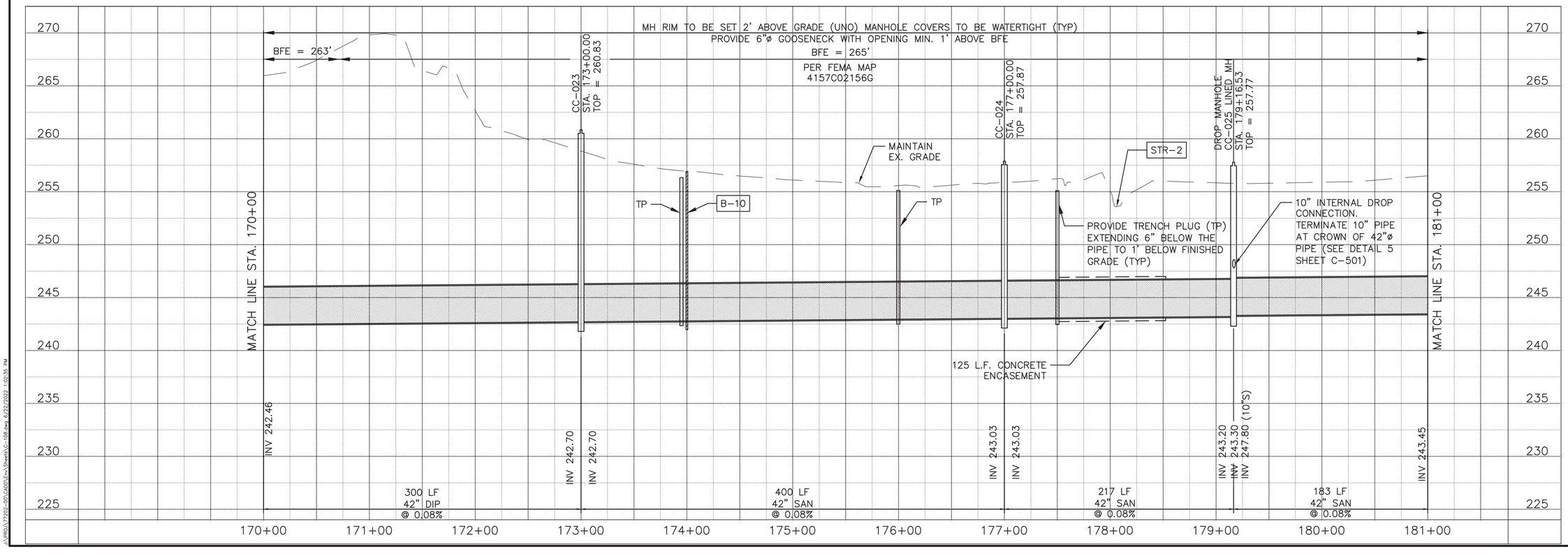
NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.



1
C-108

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-108.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 170+00
TO
STA. 181+00

DRAWING NO.
C-108

SHEET 16 OF 87

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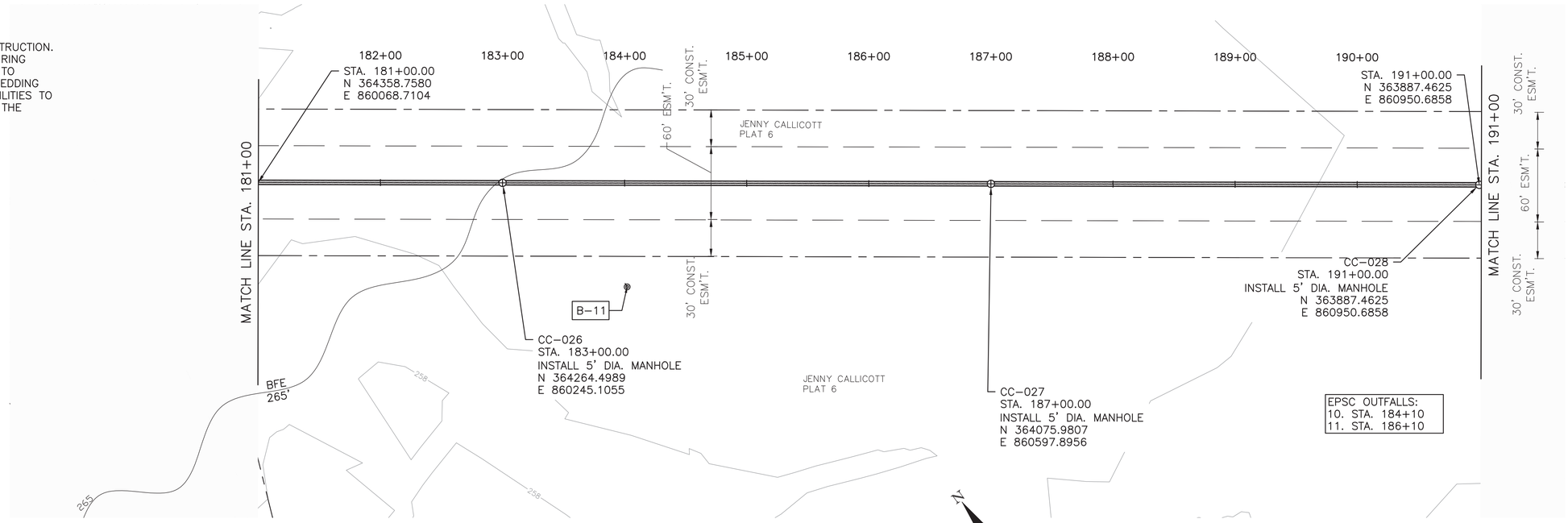
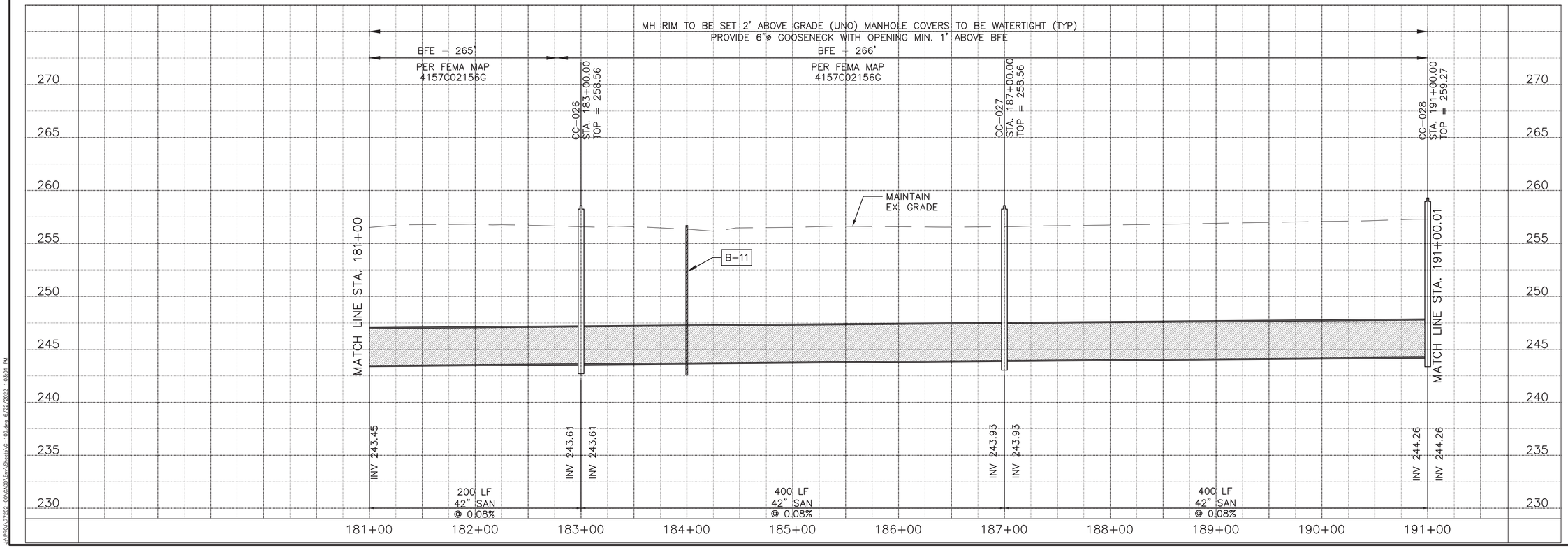
NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.



1 C-109

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VESELY
REGISTERED ENGINEER
STATE OF FLORIDA
07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-109.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

P&P

STA. 181+00
TO
STA. 191+00

DRAWING NO.
C-109

SHEET 17 OF 87

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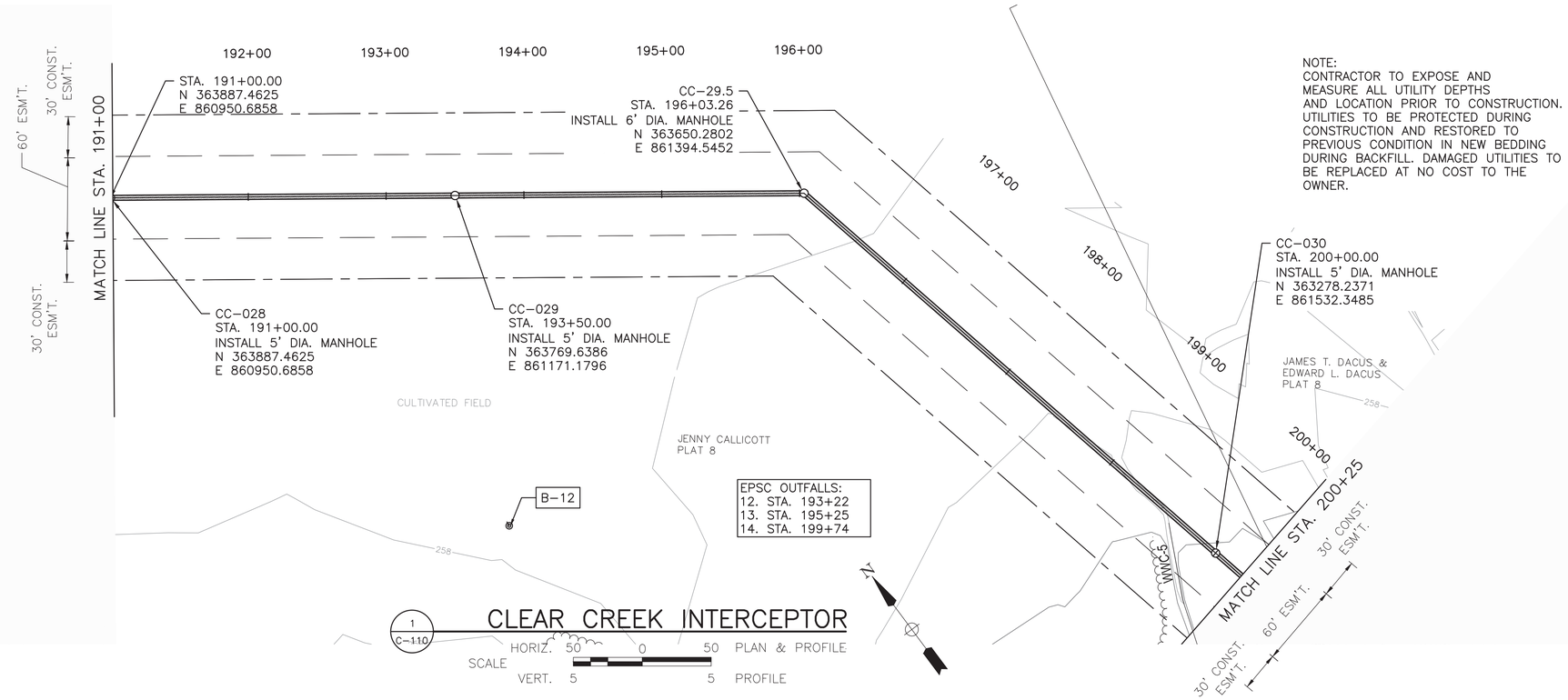

NOTE:
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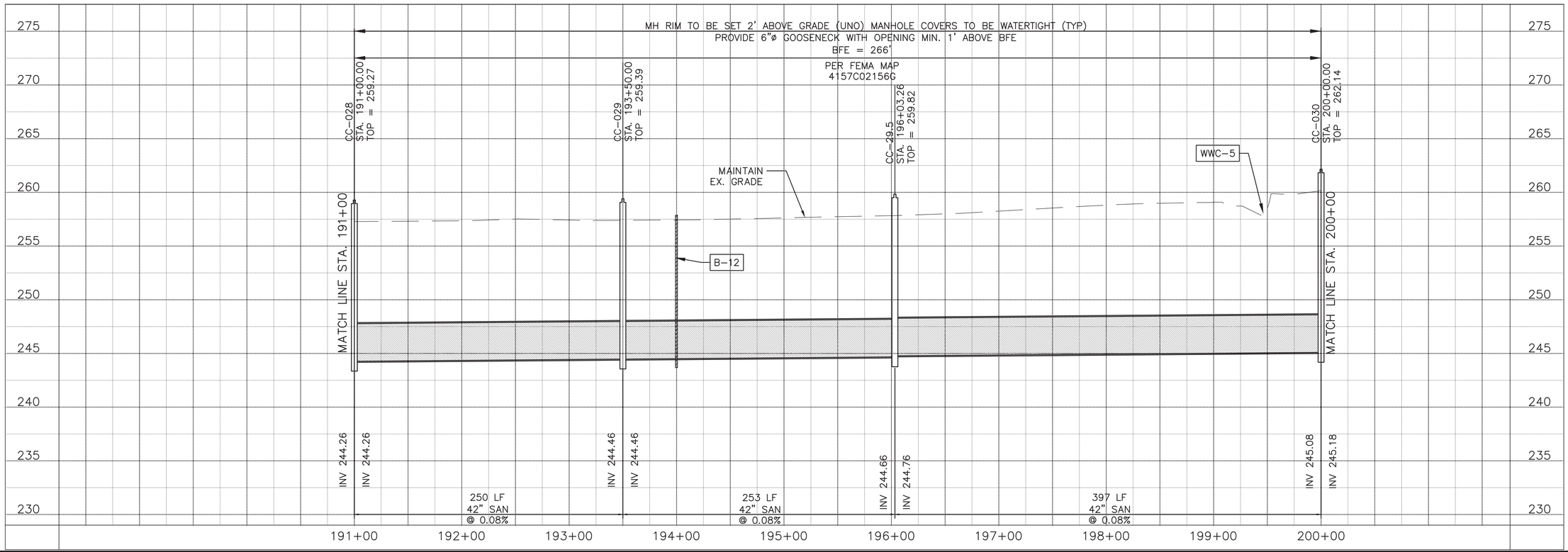


BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CC VERIFIED DIGITALLY SIGNED BY DAVID VOLLMER LICENSE NO. 73424 STATE OF FLORIDA
07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-110.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 191+00
TO
STA. 200+00

DRAWING NO.
C-110

SHEET 18 OF 87

NOTE:

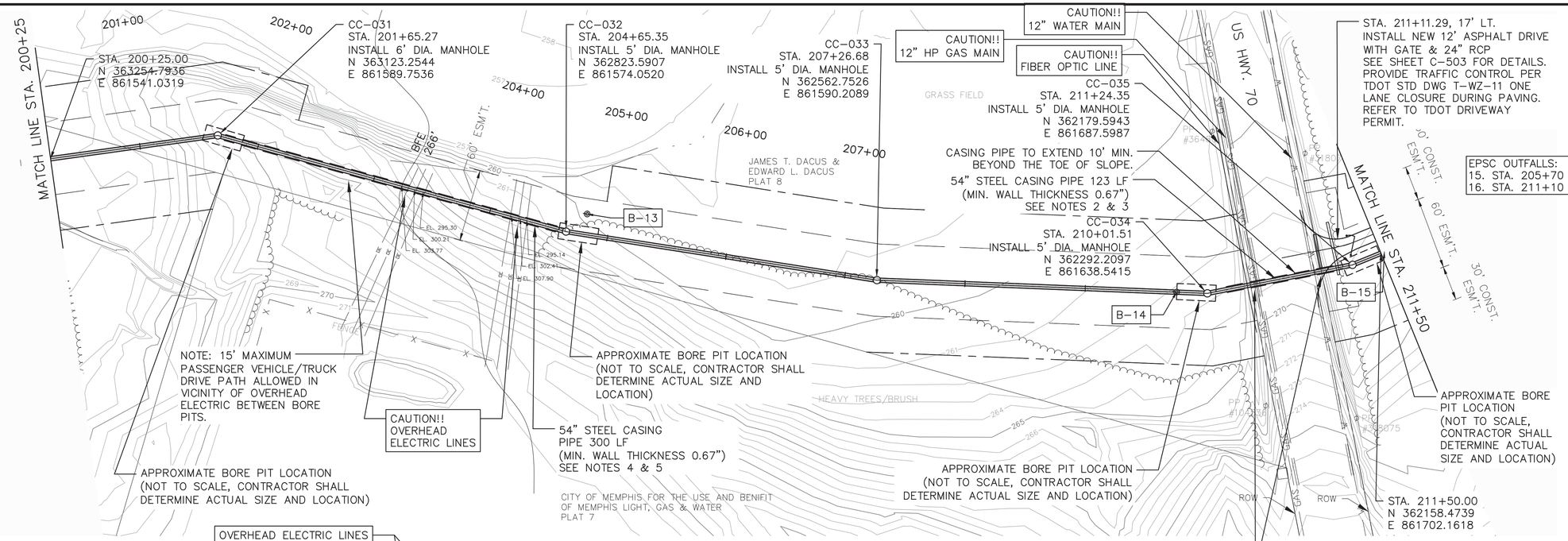
1. CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

2. CC–034 TO CC–035
CONTRACTOR TO REVIEW AND COMPLY WITH ALL CRITERIA STATED IN THE HIGHWAY OCCUPANCY PERMIT AND AS REQUIRED BY TDOT REPRESENTATIVE. REFERENCE TDOT AGREEMENT NO.GA2007055313–2019. NO WORK ASSOCIATED WITH THE HIGHWAY CROSSING MAY COMMENCE INCLUSIVE OF CONSTRUCTION OF BORE PITS AND DEWATERING UNTIL AUTHORIZED BY TDOT AND THE CITY OF LAKELAND.

3. THE JACK AND BORE OPERATION WILL PROCEED AROUND THE CLOCK WITHOUT STOPPAGE UNTIL CASING PIPE IS INSTALLED AND ANY OPENINGS ARE SEALED WITH GROUT AS APPROVED BY TDOT REPRESENTATIVE.

4. CC–031 TO CC–032
CONTRACTOR TO SUBMIT A WORK PLAN COVERING ALL DETAILS OF THE BORED CROSSED FOR APPROVAL BY THE CITY OF LAKELAND INCLUSIVE OF BORE PITS, DEWATERING, AND JACKING AND BORING FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION.

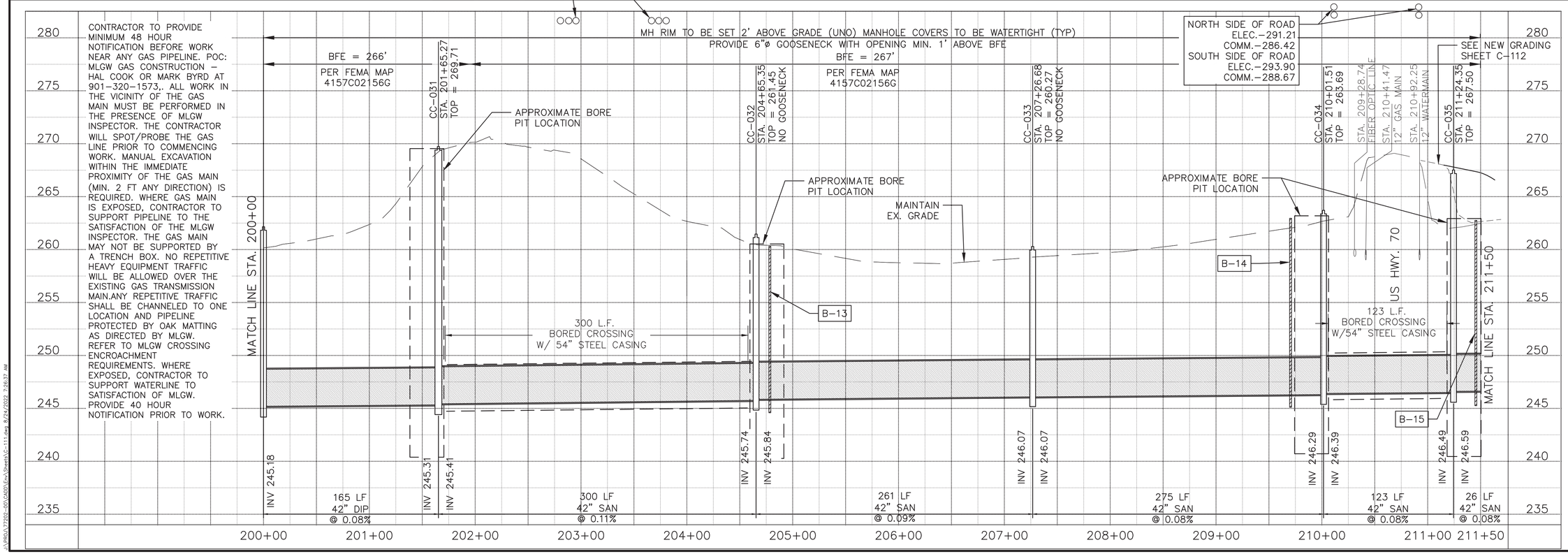
5. THE JACK AND BORE OPERATION WILL PROCEED AROUND THE CLOCK WITHOUT STOPPAGE UNTIL CASING PIPE IS INSTALLED AND ANY OPENINGS ARE SEALED WITH GROUT AS APPROVED BY CITY OF LAKELAND.



1 / C–111

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

08/25/2021

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–111.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

P&P

STA. 200+00
TO
STA. 211+50

DRAWING NO. C–111

SHEET 19 OF 87

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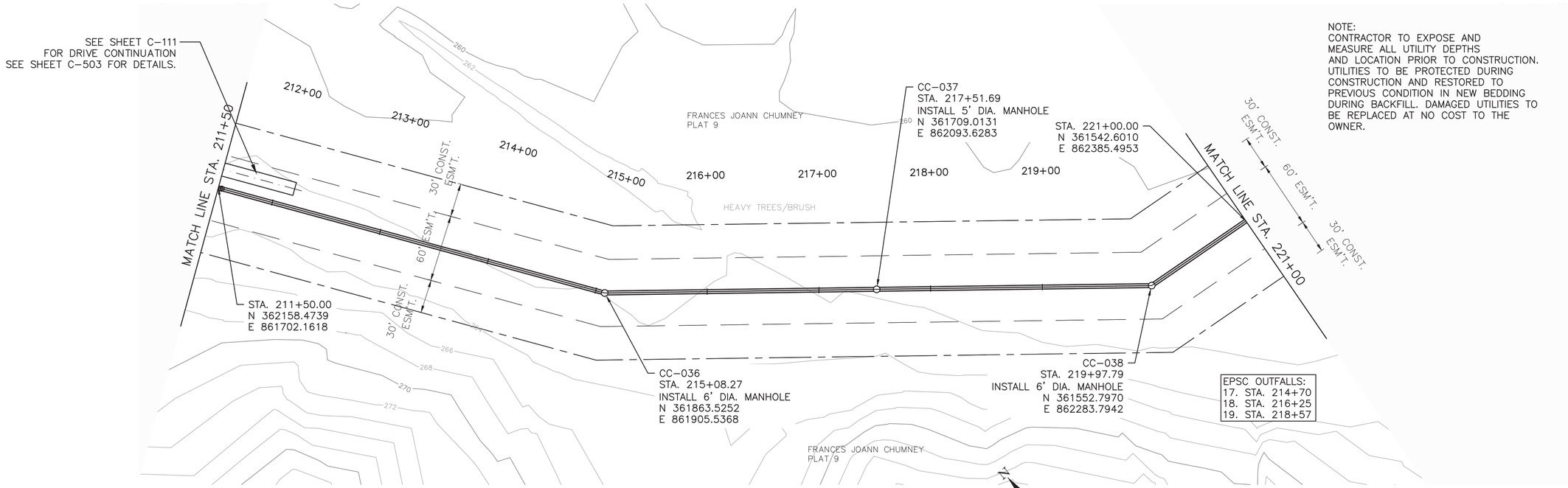
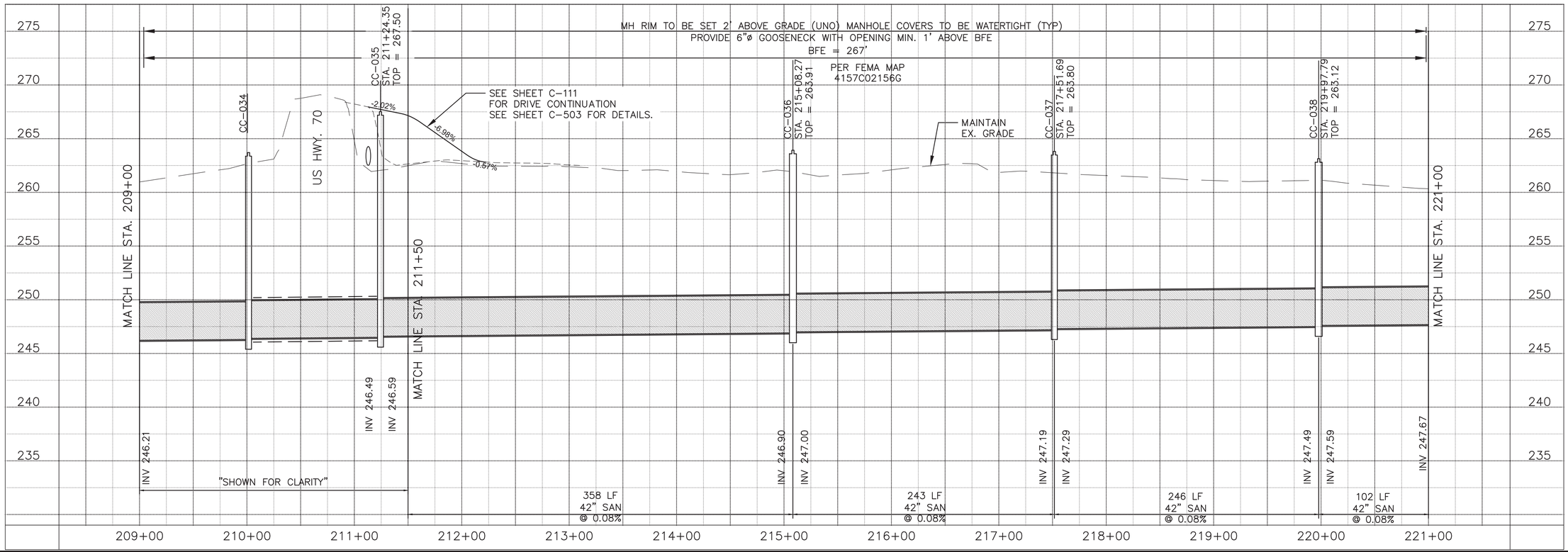


1 C-112

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-112.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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P&P

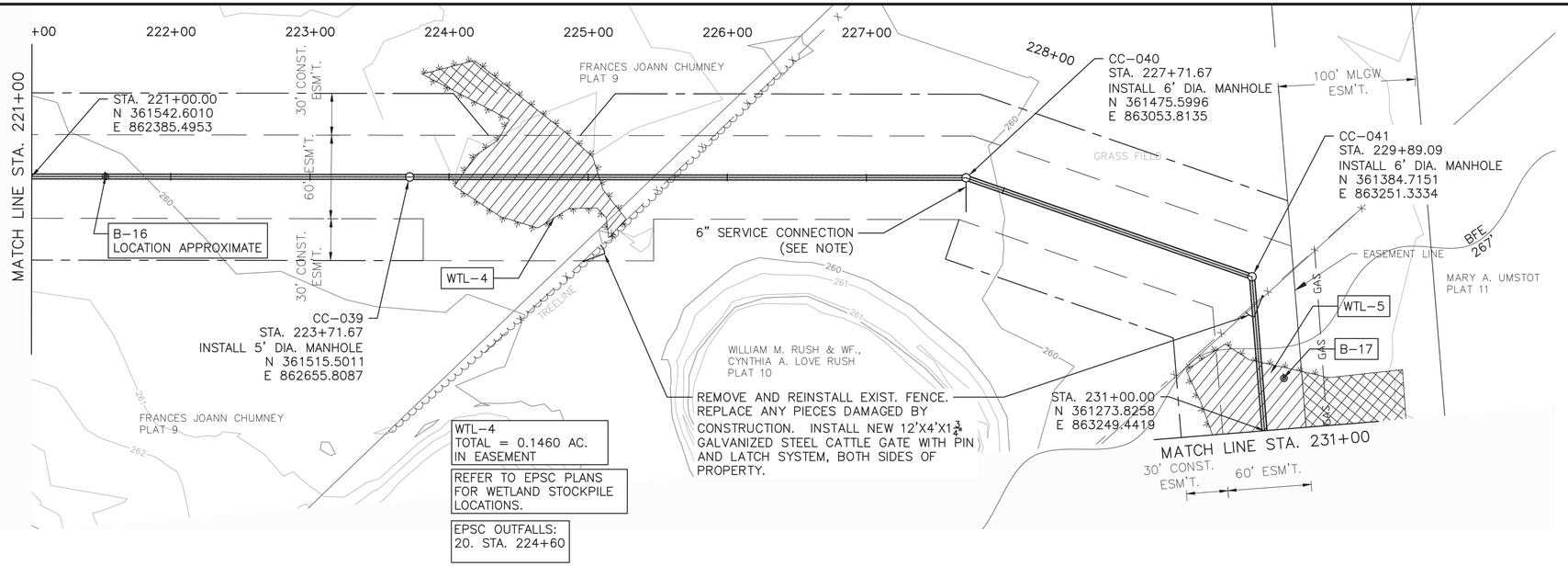
STA. 211+50
TO
STA. 221+00

DRAWING NO.
C-112

SHEET 20 OF 87

NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

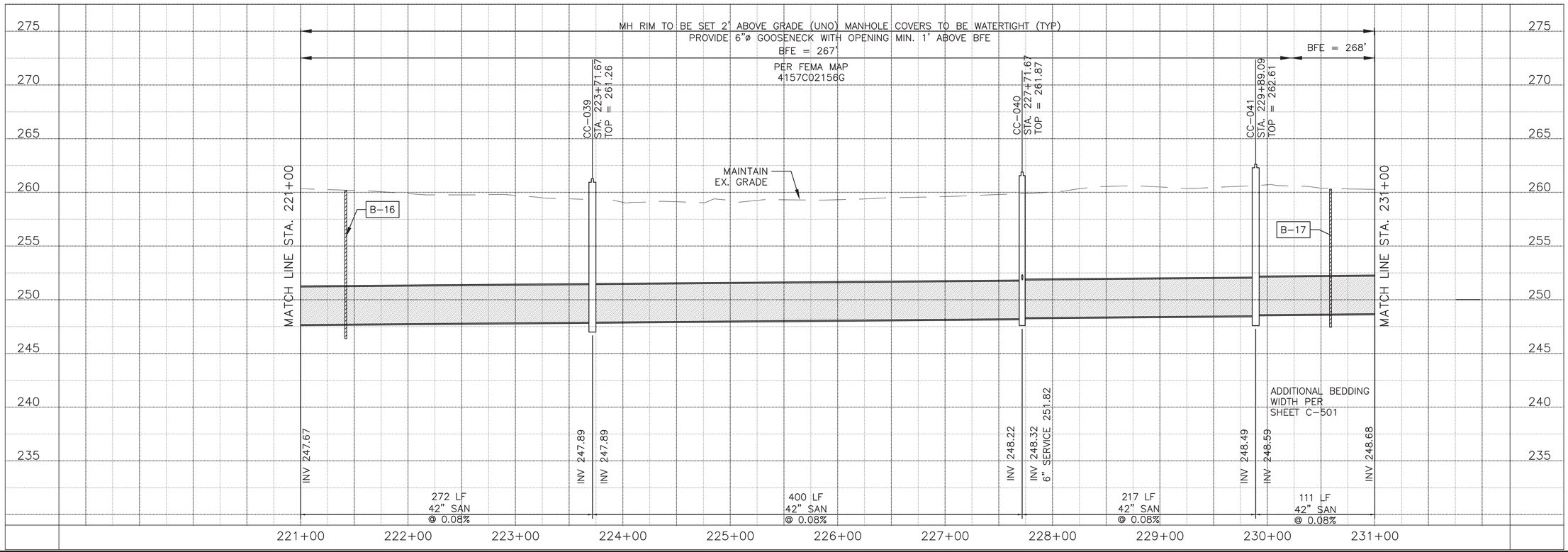
INSTALL 6" SERVICE CONNECTION IN MH CC-040. PIPE INVERT TO MATCH CROWN OF 42" PIPE. EXTEND PIPE 20 LF BEYOND MH AT 2% SLOPE. SEE SANITARY SEWER SERVICE CONNECTION DETAIL.



1
C-113

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VESELY — REGISTERED ENGINEER — STATE OF TENNESSEE
08/25/2021

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-113.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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P&P

STA. 221+00
TO
STA. 231+00

DRAWING NO.
C-113

SHEET 21 OF 87

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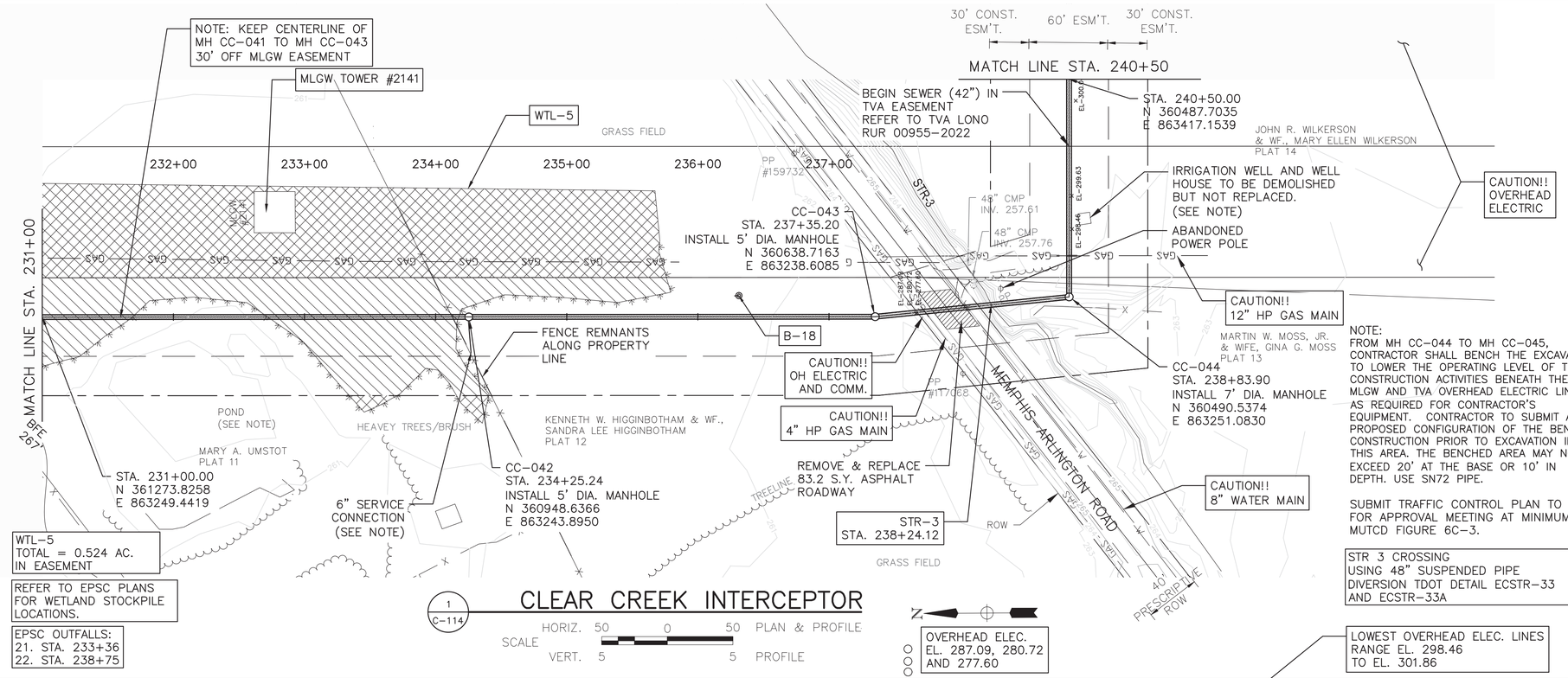
NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

POND NOTE:
POND ON UMSTOTT PROPERTY TO BE RESTORED AFTER CONSTRUCTION IS COMPLETE. OWNER NOTES POND WAS DUG TO A DEPTH OF 27' APPROXIMATELY 40 YEARS AGO. CURRENT DEPTH OF POND IS UNKNOWN. THE CONTRACTOR IS NOT REQUIRED TO MUCK POND BEYOND WHAT MAYBE REQUIRED FOR CONSTRUCTION. THE CITY HAS PAID FOR EXISTING FISH POPULATION. OWNER TO RESTOCK AFTER CONSTRUCTION.

IRRIGATION WELL NOTE:
DEPTH OF WELL UNKNOWN. WELL TO BE ABANDONED BY A LICENSED CONTRACTOR PRIOR TO EXCAVATION IN THIS AREA. DURING TRENCH EXCAVATION, EXPOSE THE ABANDONED WELL CASING. REMOVE THE EXPOSED WELL CASING SO THAT IT DOES NOT INTERFERE WITH THE INSTALLATION OF THE SEWER. CAP THE REMAINING WELL AS APPROVED BY THE PERMITTING AGENCY.

INSTALL 6" SERVICE CONNECTION IN MH CC-042. PIPE INVERT TO MATCH CROWN OF 42" PIPE. EXTEND PIPE 20 LF BEYOND MH AT 2% SLOPE. SEE SANITARY SEWER SERVICE CONNECTION DETAIL.



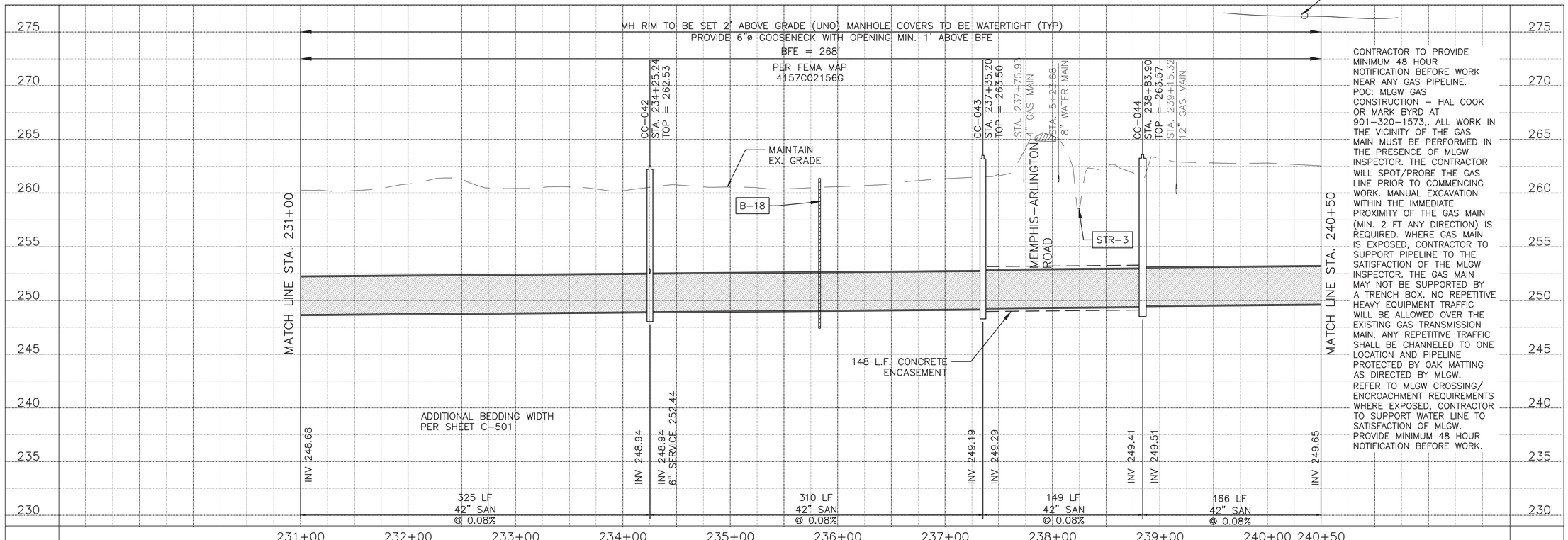
NOTE:
FROM MH CC-044 TO MH CC-045, CONTRACTOR SHALL BENCH THE EXCAVATION TO LOWER THE OPERATING LEVEL OF THE CONSTRUCTION ACTIVITIES BENEATH THE MLGW AND TVA OVERHEAD ELECTRIC LINES AS REQUIRED FOR CONTRACTOR'S EQUIPMENT. CONTRACTOR TO SUBMIT A PROPOSED CONFIGURATION OF THE BENCHED CONSTRUCTION PRIOR TO EXCAVATION IN THIS AREA. THE BENCHED AREA MAY NOT EXCEED 20' AT THE BASE OR 10' IN DEPTH. USE SN72 PIPE.

SUBMIT TRAFFIC CONTROL PLAN TO CITY FOR APPROVAL MEETING AT MINIMUM MUTCD FIGURE 6C-3.

1 C-114

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



CONTRACTOR TO PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK NEAR ANY GAS PIPELINE. POC: MLGW GAS CONSTRUCTION – HAL COOK OR MARK BYRD AT 901-320-1573,. ALL WORK IN THE VICINITY OF THE GAS MAIN MUST BE PERFORMED IN THE PRESENCE OF MLGW INSPECTOR. THE CONTRACTOR WILL SPOT/PROBE THE GAS LINE PRIOR TO COMMENCING WORK. MANUAL EXCAVATION WITHIN THE IMMEDIATE PROXIMITY OF THE GAS MAIN (MIN. 2 FT ANY DIRECTION) IS REQUIRED. WHERE GAS MAIN IS EXPOSED, CONTRACTOR TO SUPPORT PIPELINE TO THE SATISFACTION OF THE MLGW INSPECTOR. THE GAS MAIN MAY NOT BE SUPPORTED BY A TRENCH BOX. NO REPETITIVE HEAVY EQUIPMENT TRAFFIC WILL BE ALLOWED OVER THE EXISTING GAS TRANSMISSION MAIN. ANY REPETITIVE TRAFFIC SHALL BE CHANNELED TO ONE LOCATION AND PIPELINE PROTECTED BY OAK MATTING AS DIRECTED BY MLGW. REFER TO MLGW CROSSING/ ENCROACHMENT REQUIREMENTS WHERE EXPOSED, CONTRACTOR TO SUPPORT WATER LINE TO SATISFACTION OF MLGW. PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK.

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VICKERY 24183 LICENSED PROFESSIONAL ENGINEER STATE OF TENNESSEE 12/08/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-114.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 231+00
TO
STA. 240+50

DRAWING NO.
C-114

SHEET 22 OF 87

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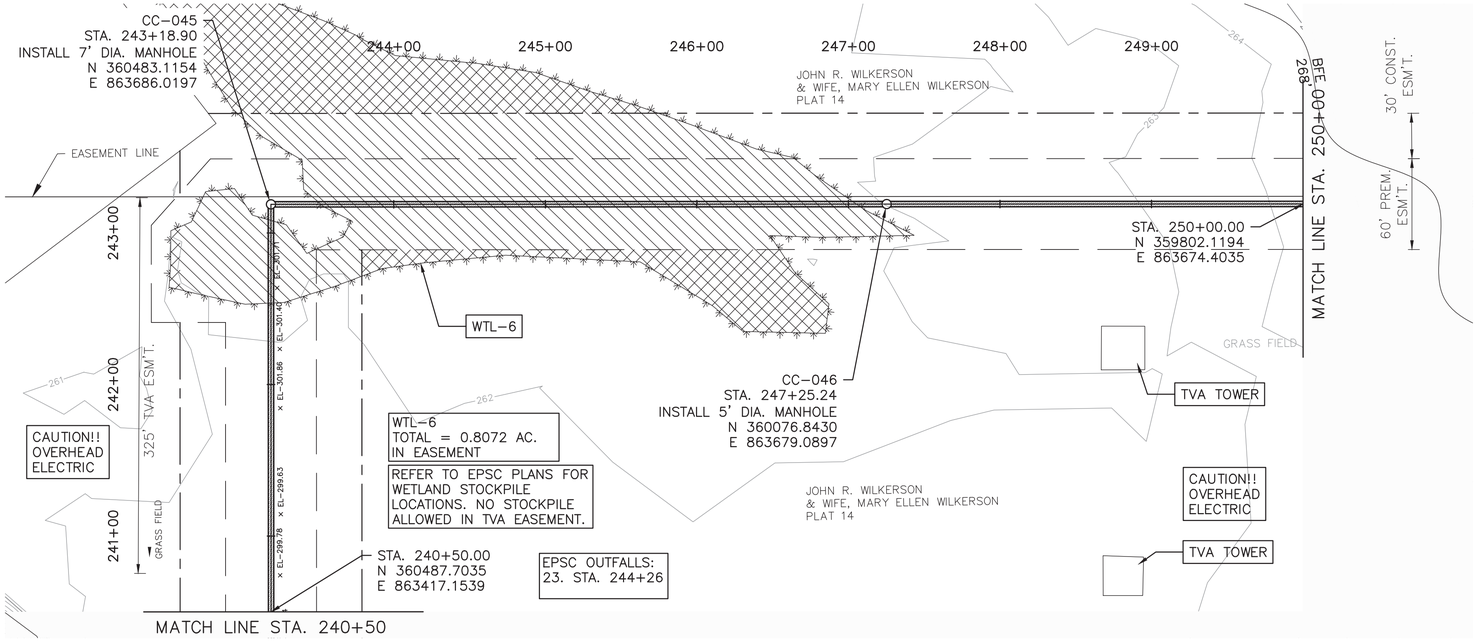

NOTE:
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NOTE:
FROM MH CC–044 TO MH CC–045, CONTRACTOR SHALL BENCH THE TRENCH EXCAVATION TO FACILITATE CONSTRUCTION UNDER THE MLGW AND TVA OVERHEAD ELECTRIC LINES.

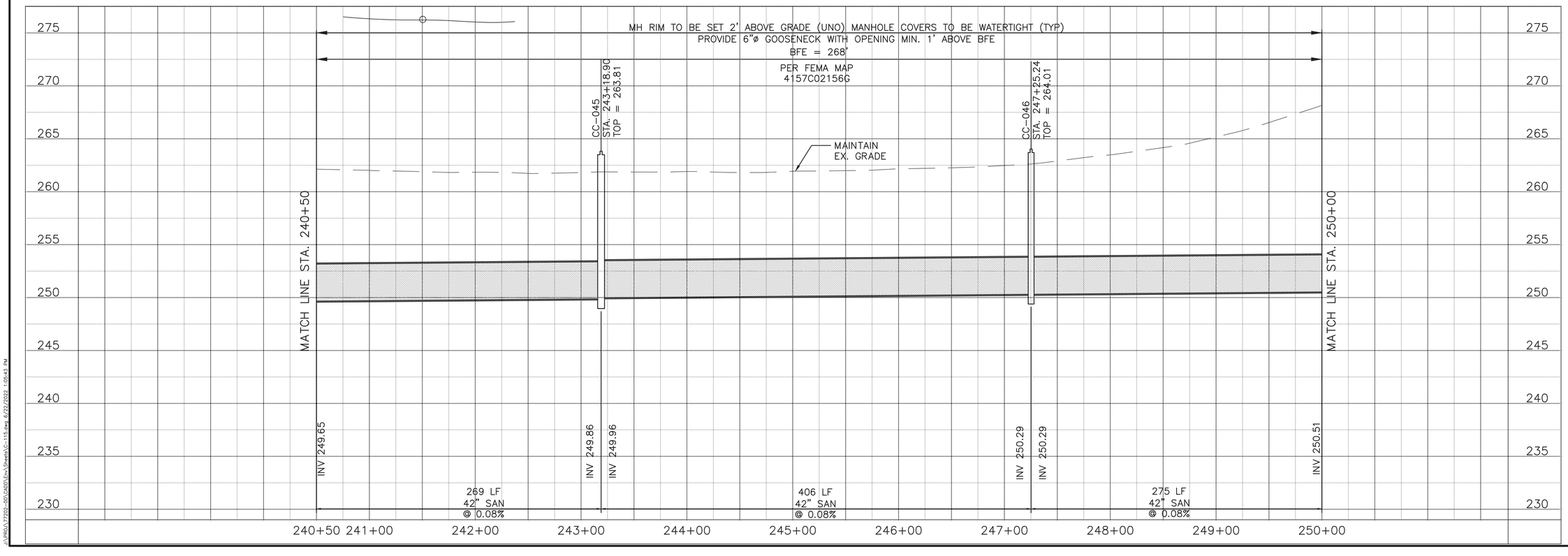
SEWER IN TVA EASEMENT REFER TO TVA LONO RUR 00955–2019 PROVIDE MINIMUM 14 DAY NOTICE OF OPERATION ON OR NEAR TVA EASEMENT: rightofway@TVA.gov or (844)812–2626 7am–2:30 pm CST MONDAY–THURSDAY

1 / C–115

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE

N



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

STATE OF TENNESSEE
JOHN C. VERDELL BRADLEY
REGISTERED ENGINEER
No. 120161
6/17/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–115.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

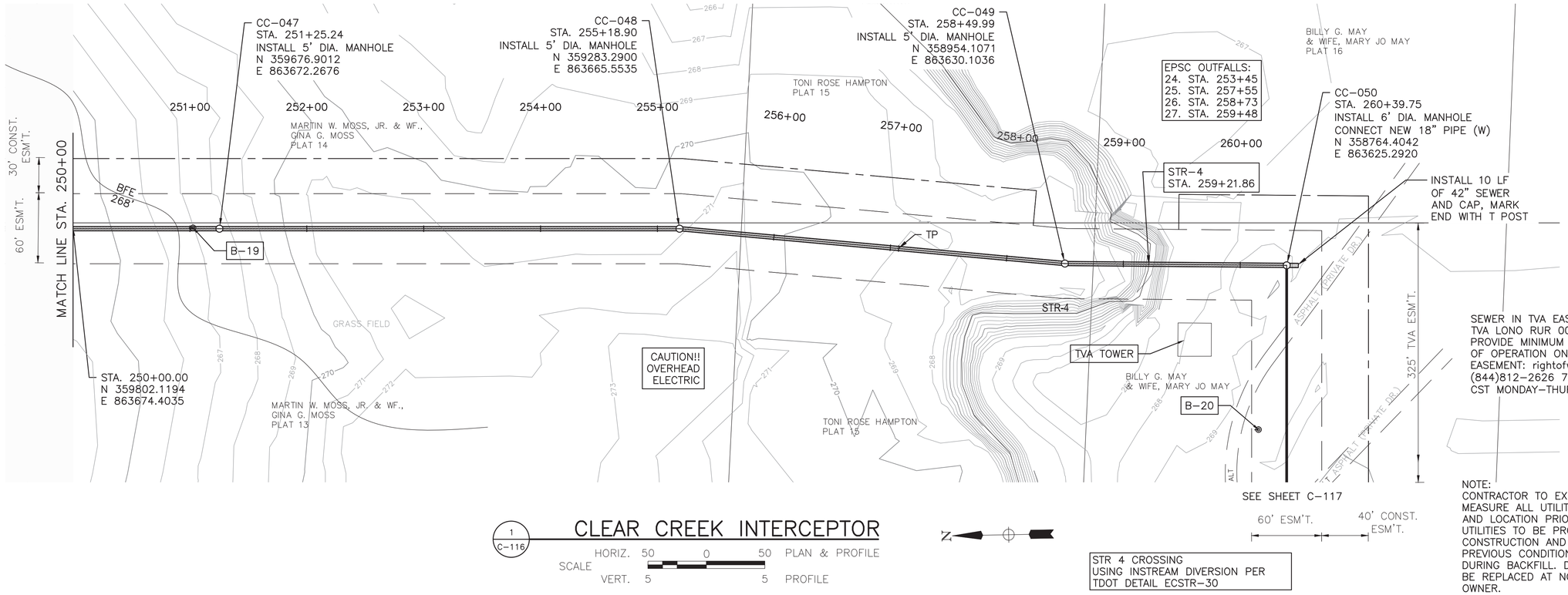
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 240+50
TO
STA. 250+00

DRAWING NO.
C–115

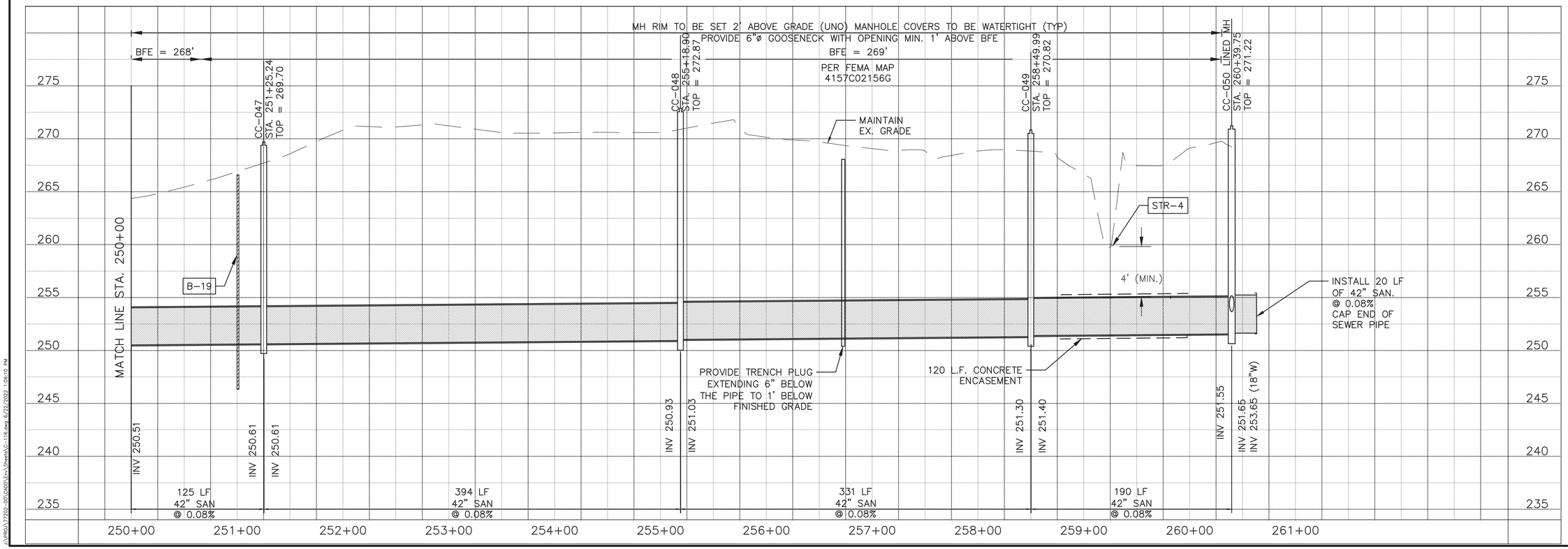
SHEET 23 OF 87



1 / C-116

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
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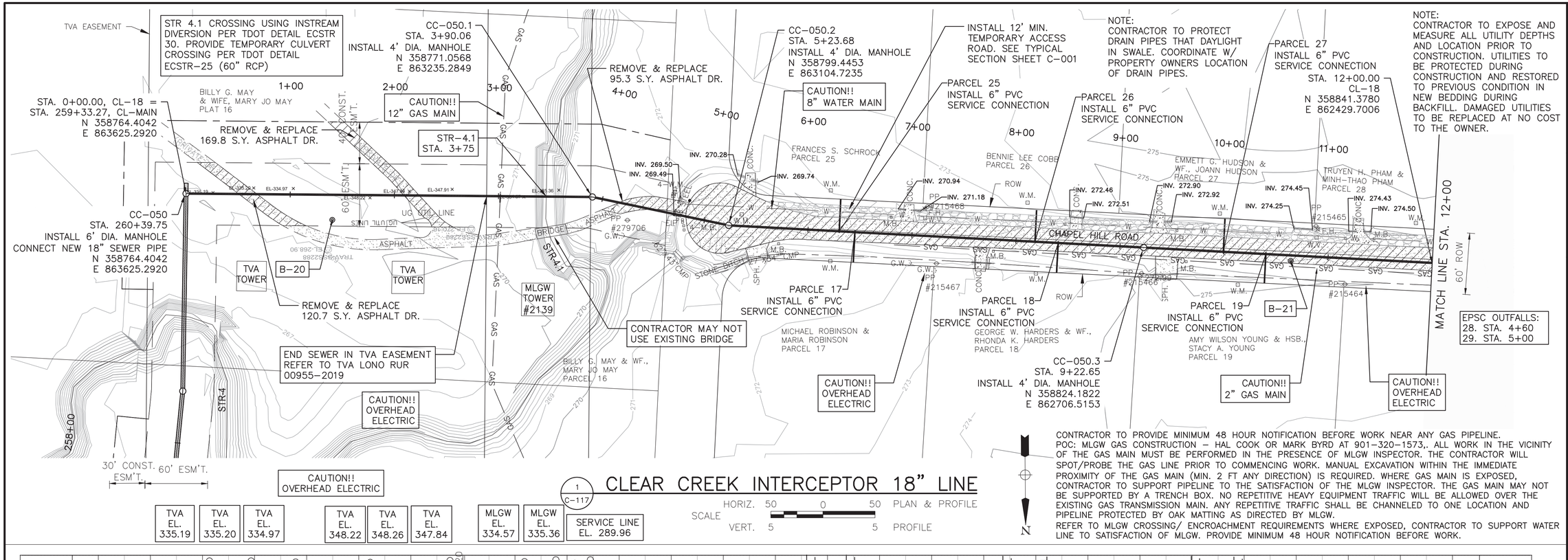
P&P

STA. 250+00
TO
STA. 260+39.75

DRAWING NO.
C-116

SHEET 24 OF 87



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–117.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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P&P

STA. 0+00 TO STA. 12+00

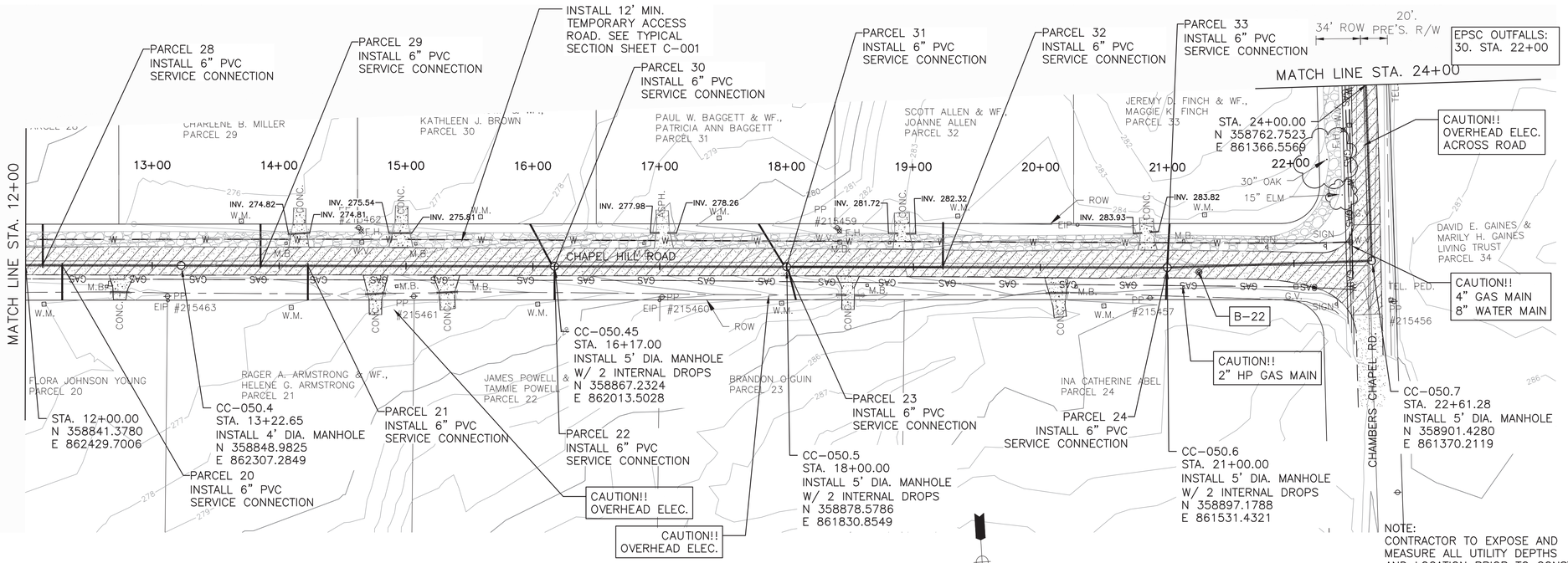
DRAWING NO. C–117

SHEET 25 OF 87

J:\PROJ\77202–00\CAD\Eng\Sheets\C–117.dwg, 6/21/2022 8:44:32 AM

CONTRACTOR TO PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK NEAR ANY GAS PIPELINE. POC: MLGW GAS CONSTRUCTION – HAL COOK OR MARK BYRD AT 901-320-1573,. ALL WORK IN THE VICINITY OF THE GAS MAIN MUST BE PERFORMED IN THE PRESENCE OF MLGW INSPECTOR. THE CONTRACTOR WILL SPOT/PROBE THE GAS LINE PRIOR TO COMMENCING WORK. MANUAL EXCAVATION WITHIN THE IMMEDIATE PROXIMITY OF THE GAS MAIN (MIN. 2 FT ANY DIRECTION) IS REQUIRED. WHERE GAS MAIN IS EXPOSED, CONTRACTOR TO SUPPORT PIPELINE TO THE SATISFACTION OF THE MLGW INSPECTOR. THE GAS MAIN MAY NOT BE SUPPORTED BY A TRENCH BOX. NO REPETITIVE HEAVY EQUIPMENT TRAFFIC WILL BE ALLOWED OVER THE EXISTING GAS TRANSMISSION MAIN. ANY REPETITIVE TRAFFIC SHALL BE CHANNELED TO ONE LOCATION AND PIPELINE PROTECTED BY OAK MATTING AS DIRECTED BY MLGW. REFER TO MLGW CROSSING/ ENCROACHMENT REQUIREMENTS WHERE EXPOSED, CONTRACTOR TO SUPPORT WATER LINE TO SATISFACTION OF MLGW. PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK.

NOTE:
CONTRACTOR TO PROTECT DRAIN PIPES THAT DAYLIGHT IN SWALE. COORDINATE W/ PROPERTY OWNERS LOCATION OF DRAIN PIPES.

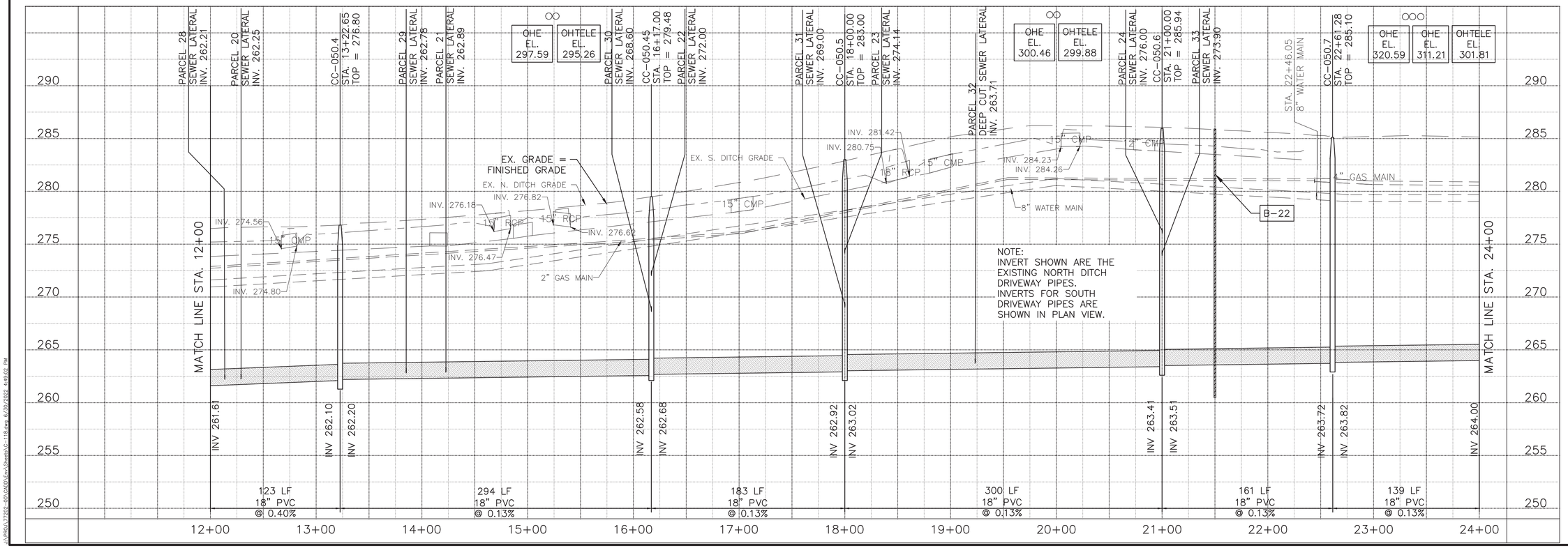


1 / C-118 CLEAR CREEK INTERCEPTOR 18" LINE

SCALE HORIZ. 50 0 50 PLAN & PROFILE
SCALE VERT. 5 5 PROFILE

NOTE:
PROVIDE INTERNAL DROP CONNECTION FOR ALL LATERALS THAT TIE INTO A MANHOLE AND LINE MH.

NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.



BUCHART HORN ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-118.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

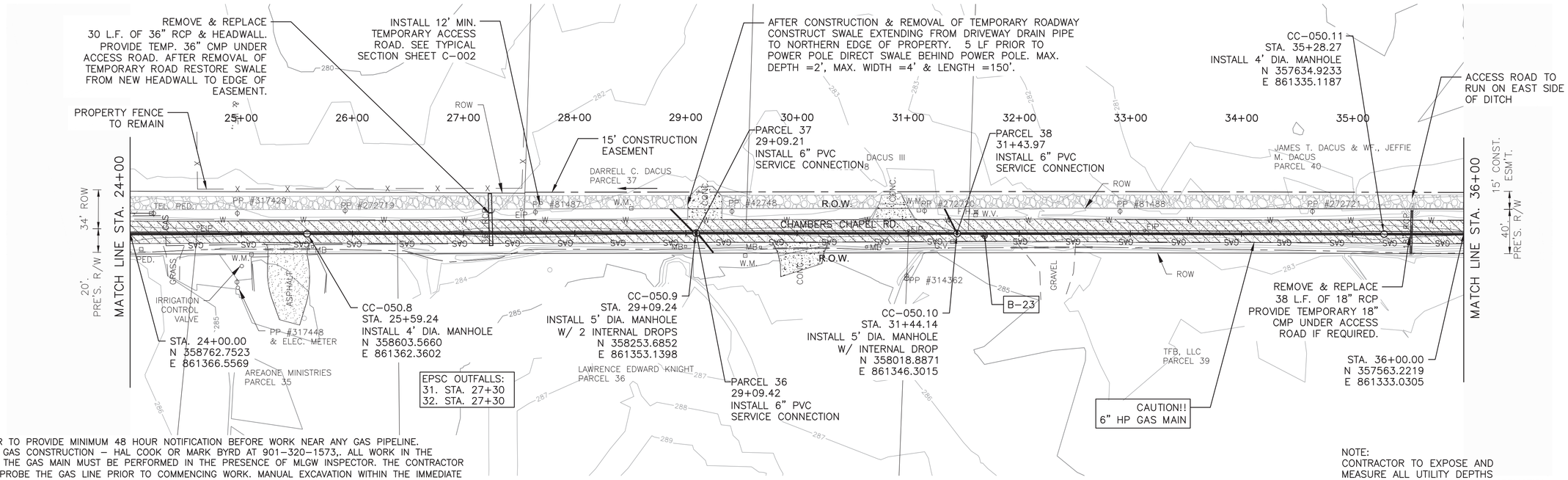
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 12+00 TO STA. 24+00

DRAWING NO. C-118

SHEET 26 OF 87



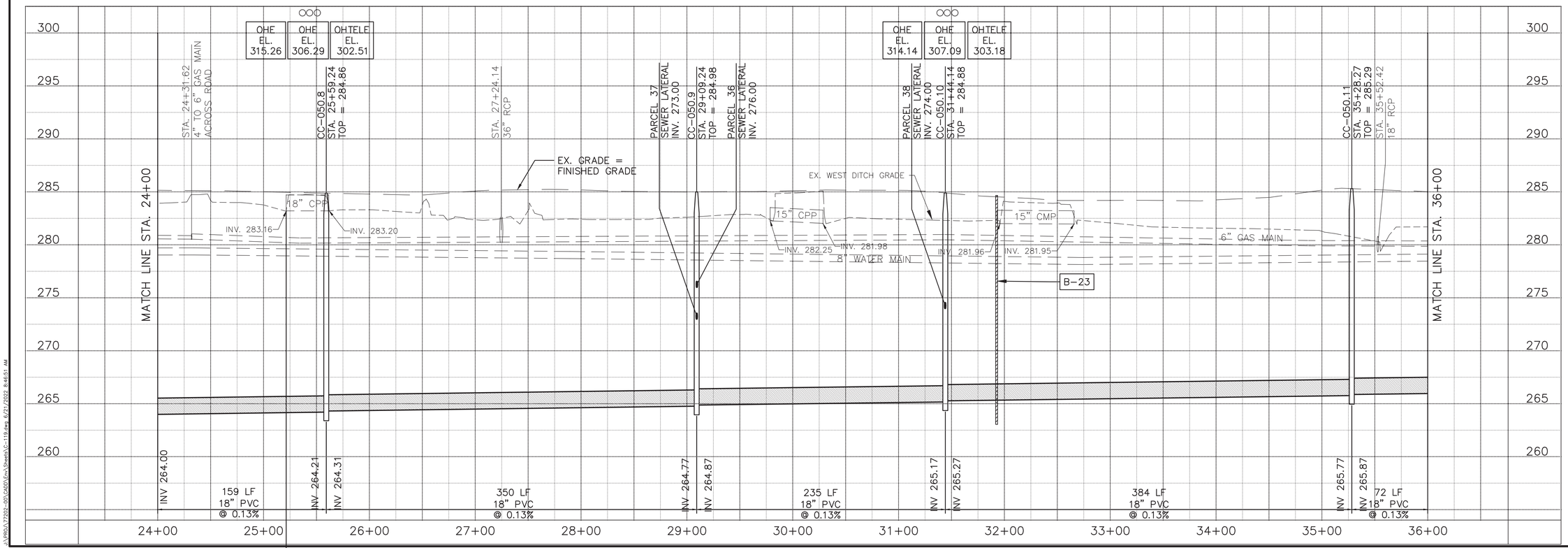
CONTRACTOR TO PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK NEAR ANY GAS PIPELINE. POC: MLGW GAS CONSTRUCTION – HAL COOK OR MARK BYRD AT 901-320-1573,. ALL WORK IN THE VICINITY OF THE GAS MAIN MUST BE PERFORMED IN THE PRESENCE OF MLGW INSPECTOR. THE CONTRACTOR WILL SPOT/PROBE THE GAS LINE PRIOR TO COMMENCING WORK. MANUAL EXCAVATION WITHIN THE IMMEDIATE PROXIMITY OF THE GAS MAIN (MIN. 2 FT ANY DIRECTION) IS REQUIRED. WHERE GAS MAIN IS EXPOSED, CONTRACTOR TO SUPPORT PIPELINE TO THE SATISFACTION OF THE MLGW INSPECTOR. THE GAS MAIN MAY NOT BE SUPPORTED BY A TRENCH BOX. NO REPETITIVE HEAVY EQUIPMENT TRAFFIC WILL BE ALLOWED OVER THE EXISTING GAS TRANSMISSION MAIN. ANY REPETITIVE TRAFFIC SHALL BE CHANNELED TO ONE LOCATION AND PIPELINE PROTECTED BY OAK MATTING AS DIRECTED BY MLGW.
REFER TO MLGW CROSSING/ ENCROACHMENT REQUIREMENTS WHERE EXPOSED, CONTRACTOR TO SUPPORT WATER LINE TO SATISFACTION OF MLGW. PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK.

1 / C-119 CLEAR CREEK INTERCEPTOR 18" LINE

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE

NOTE: PROVIDE INTERNAL DROP CONNECTION FOR ALL LATERALS THAT TIE INTO A MANHOLE AND LINE MH.

NOTE: CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.



BUCHART HORN ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-119.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

P&P

STA. 24+00 TO STA. 36+00

DRAWING NO. C-119

SHEET 27 OF 87

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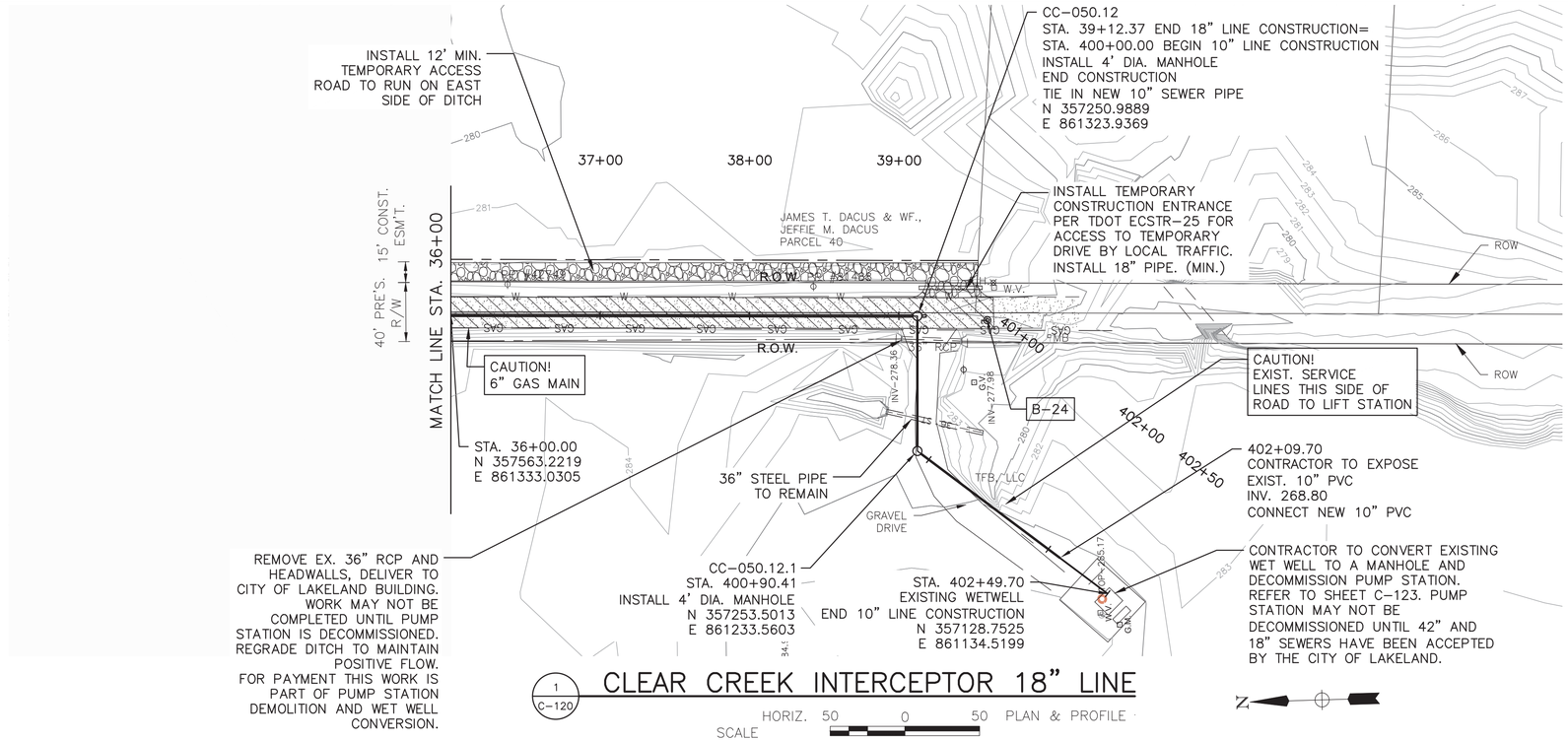


1 / C-120

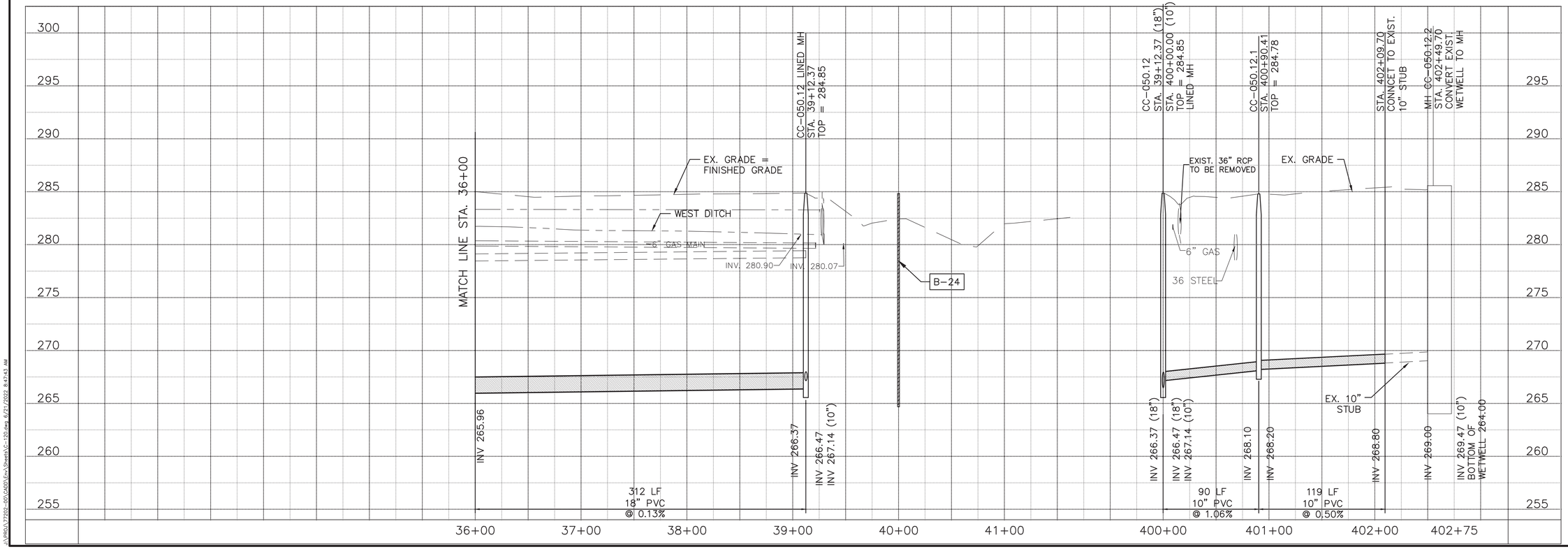
CLEAR CREEK INTERCEPTOR 18" LINE

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE

NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

CONTRACTOR TO PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK NEAR ANY GAS PIPELINE.
POC: MLGW GAS CONSTRUCTION – HAL COOK OR MARK BYRD AT 901-320-1573,.
ALL WORK IN THE VICINITY OF THE GAS MAIN MUST BE PERFORMED IN THE PRESENCE OF MLGW INSPECTOR. THE CONTRACTOR WILL SPOT/PROBE THE GAS LINE PRIOR TO COMMENCING WORK. MANUAL EXCAVATION WITHIN THE IMMEDIATE PROXIMITY OF THE GAS MAIN (MIN. 2 FT ANY DIRECTION) IS REQUIRED. WHERE GAS MAIN IS EXPOSED, CONTRACTOR TO SUPPORT PIPELINE TO THE SATISFACTION OF THE MLGW INSPECTOR. THE GAS MAIN MAY NOT BE SUPPORTED BY A TRENCH BOX. NO REPETITIVE HEAVY EQUIPMENT TRAFFIC WILL BE ALLOWED OVER THE EXISTING GAS TRANSMISSION MAIN. ANY REPETITIVE TRAFFIC SHALL BE CHANNELED TO ONE LOCATION AND PIPELINE PROTECTED BY OAK MATTING AS DIRECTED BY MLGW.
REFER TO MLGW CROSSING/ ENCROACHMENT REQUIREMENTS WHERE EXPOSED, CONTRACTOR TO SUPPORT WATER LINE TO SATISFACTION OF MLGW. PROVIDE MINIMUM 48 HOUR NOTIFICATION BEFORE WORK.

EPSC OUTFALLS:
33. STA. 39+12
34. STA. 38+88
35. STA. 39+27



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DIANE C. VESELY LICENSED PROFESSIONAL ENGINEER STATE OF TENNESSEE 6/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-120.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

P&P

STA. 36+00
TO
STA. 39+12.37

DRAWING NO.
C-120

SHEET 28 OF 87

J:\PROJ\77202-00\CADD\Civil Sheets\C-120.dwg, 6/21/2022 8:47:43 AM

NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.

NOTE:
THE 10" SEWER IS DEPICTED TO MAINTAIN THE CONSISTENCY OF THE OUTGOING PATH OF THE PRIMARY 42" DIAMETER SEWER. AS SUCH IT IS NECESSARY FOR THE SEWER STATIONING TO PROCEED FROM RIGHT TO LEFT ACROSS THE PAGE.

EPSC OUTFALLS:
36. STA. 512+00

CC-025
STA. 179+16.53, CL-MAIN =
STA. 500+00.00, CL-8
CONNECT NEW 10" SEWER PIPE
TO 7' DIA. DROP MANHOLE
N 364445.2265 E 859906.8946

CC-025.2
STA. 505+61.24
INSTALL 4' DIA. MANHOLE
N 363897.8856
E 859866.0851

CC-025.3
STA. 508+61.24
INSTALL 4' DIA. MANHOLE
N 363598.3344
E 859849.6815

CC-025.1
STA. 502+22.77
INSTALL 4' DIA. MANHOLE
N 364226.2899
E 859948.0190

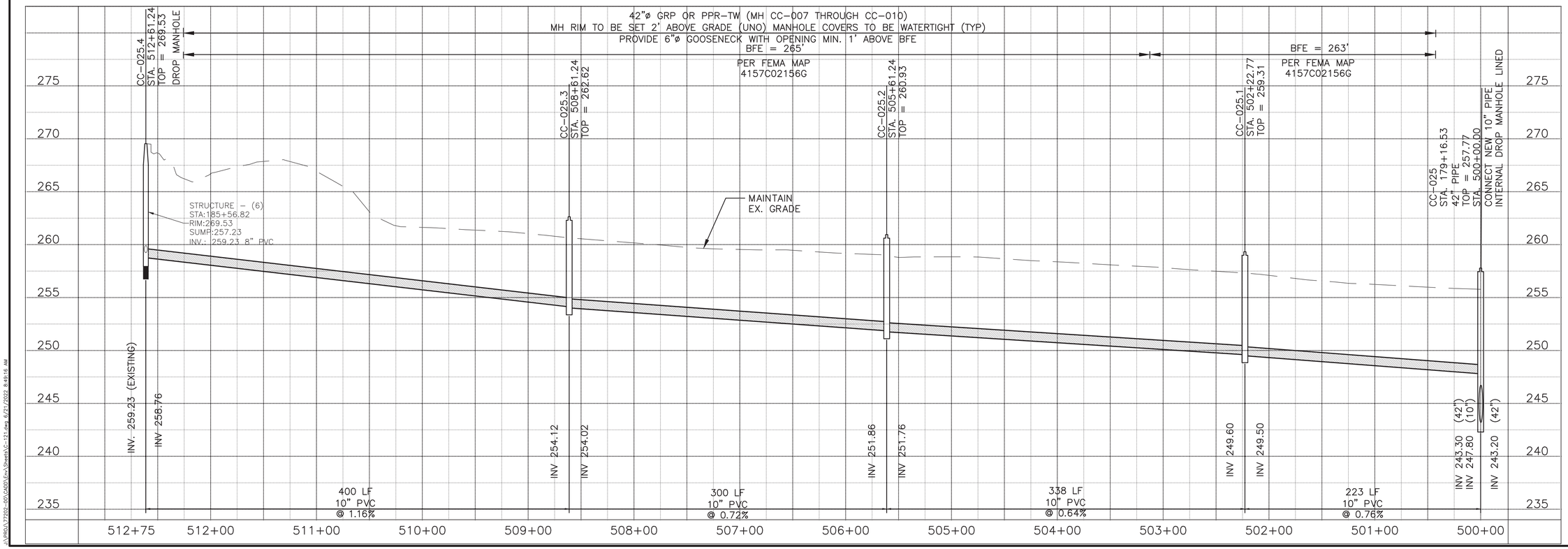
CC-025.4
STA. 512+61.24
CONVERT EXISTING WET WELL
TO 5' DIA. MANHOLE
N 363219.4220
E 859977.8430

A. SANITARY FLOW TO THE CREEKSIDE MANOR LIFT STATION TO BE REROUTED TO THE NEW SEWER AND THE LIFT STATION ELIMINATED. CONNECTION TO BE MADE AFTER THE LAKELAND CITY ENGINEER APPROVES THE NEW 42" AND 18" SEWERS. SEE SHEET C-123 FOR ADDITIONAL REQUIREMENTS.
B. CONTRACTOR'S OPERATIONS SHALL NOT AFFECT DETENTION POND OR DISCHARGE PIPE. ANY DAMAGE WILL BE RESTORED TO THE SATISFACTION OF THE LAKELAND CITY ENGINEER.

1 C-121

CLEAR CREEK INTERCETOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VERSLUIS — LICENSED PROFESSIONAL ENGINEER — STATE OF FLORIDA — 66247 — 07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-121.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
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CHECKED BY:	DV
DATE:	03/02/2021

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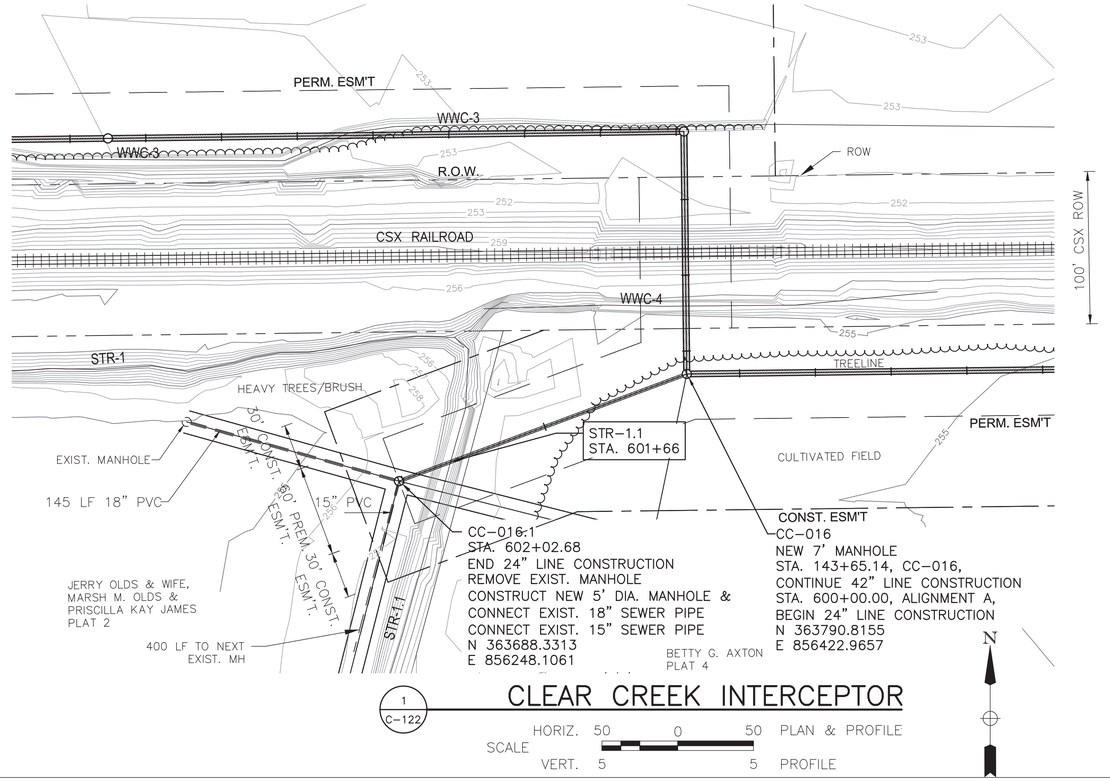
P&P

STA. 500+00
TO
STA. 512+61.24

DRAWING NO. C-121

SHEET 29 OF 87



1 / C-122

CLEAR CREEK INTERCEPTOR

SCALE HORIZ. 50 0 50 PLAN & PROFILE
VERT. 5 5 PROFILE

EPSC OUTFALLS:
6. STA. 602+02

STR 1.1 CROSSING
USING 36" SUSPENDED PIPE DIVERSION
TDOT DETAIL ECSTR-33 & 33A.
PROVIDE TEMPORARY CULVERT
CROSSING PER TDOT DETAIL ECSTR-25
(36" PIPE)

NOTE:

A. SANITARY FLOW THROUGH EXISTING 4' DIAMETER MANHOLE WILL BE REROUTED TO MH CC-016 AFTER THE LAKELAND CITY ENGINEER ACCEPTS THE 42" AND 18" SEWERS.

B. CONTRACTOR TO BYPASS PUMP EXISTING FLOWS UNTIL NEW 24" SEWER IS ACCEPTED BY THE LAKELAND CITY ENGINEER.

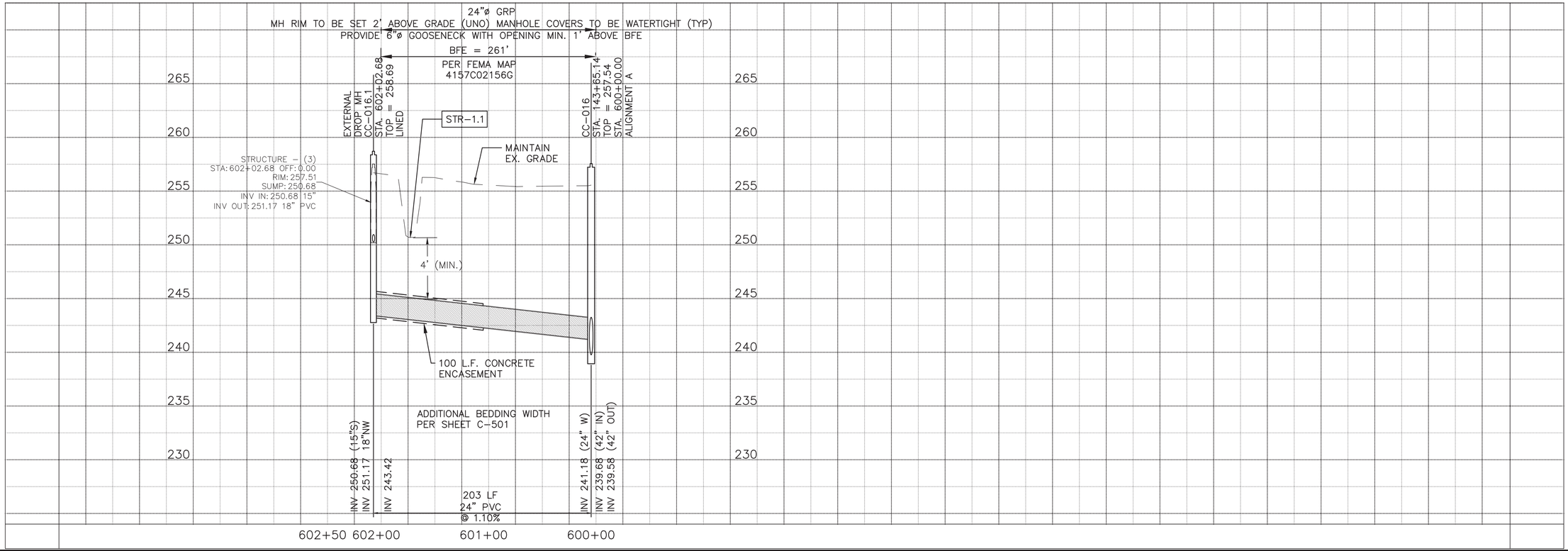
C. PROVIDE EXTERIOR DROP CONNECTION FOR EXISTING 15" DIAMETER SEWER.

D. RECONNECT 18" SEWER AT EXISTING INVERT AND SECURE PIPE WITH 18" DUCKBILL VALVE. JET CLEAN EXISTING 18" PIPE FOR 1 MH LENGTH (145 LF) PRIOR TO INSERTING VALVE.

NOTE:

THE 24" SEWER IS DEPICTED TO MAINTAIN THE CONSISTENCY OF THE OUTGOING PATH OF THE PRIMARY 42" DIAMETER SEWER. AS SUCH IT IS NECESSARY FOR THE SEWER STATIONING TO PROCEED FROM RIGHT TO LEFT ACROSS THE PAGE.

NOTE:
CONTRACTOR TO EXPOSE AND MEASURE ALL UTILITY DEPTHS AND LOCATION PRIOR TO CONSTRUCTION. UTILITIES TO BE PROTECTED DURING CONSTRUCTION AND RESTORED TO PREVIOUS CONDITION IN NEW BEDDING DURING BACKFILL. DAMAGED UTILITIES TO BE REPLACED AT NO COST TO THE OWNER.



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

PLANNED BY: B. C. VERKLEY
REGISTERED ENGINEER
No. 120744
STATE OF TENNESSEE
08/25/2021

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-122.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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P&P

STA. 600+00
TO
STA. 602+02.68

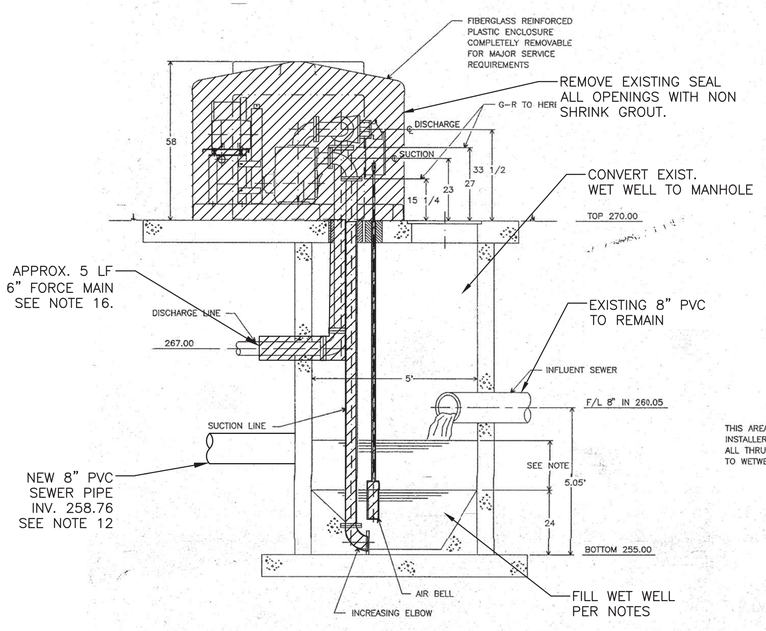
DRAWING NO.
C-122

SHEET 30 OF 87

J:\PROJ\77202-00\Cad\Env\Sheets\C-122.dwg, 8/24/2022 7:37:33 AM

GENERAL DEMOLITION NOTES:

1. PUMP STATION PLANS AS SHOWN ON THIS PAGE ARE FROM RECORD (CREEKSIDE MANOR) AND DESIGN (OAKWOOD GROVE) PLANS FURNISHED BY THE CITY OF LAKELAND AND PREPARED BY OTHERS. LIFT STATIONS ARE TO BE ABANDONED AND THE WET WELLS CONVERTED TO A SANITARY MANHOLE.
2. NEITHER LIFT STATION SHALL BE REMOVED FROM SERVICE UNTIL THE NEW 42" DIAMETER AND 18" DIAMETER SEWERS HAVE BEEN ACCEPTED BY THE CITY AND THE WORK HAS BEEN SCHEDULED WITH THE CITY.
3. CONTRACTOR SHALL BYPASS PUMP THE EXISTING SANITARY FLOW FOR THE DURATION OF CONSTRUCTION BEGINNING WITH THE DEMOLITION OF THE EXISTING STATION UNTIL THE NEW SEWER IS INSTALLED AND ACCEPTED BY THE LAKELAND CITY ENGINEER. CREEKSIDE MANOR PUMP RATE 200 GPM AND OAKWOOD GROVE PUMP RATE 800 GPM.
4. CONTRACTOR SHALL LOCATE ALL UTILITIES ON THE SITE.
5. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NEC CODE AND LOCAL REQUIREMENTS.
6. CONTRACTOR SHALL COORDINATE ALL POWER SUPPLY DEMOLITION WITH UTILITY COMPANY PRIOR TO INITIATING DEMOLITION WORK. CONTACT MLGW BUILDER SERVICES 901–729–8630 TO INITIATE THE PROCESS.
7. ALL EXISTING CONDUIT AND JUNCTION BOXES SHALL BE REMOVED BACK TO THEIR SOURCE OF ORIGIN. JUNCTION BOXES SHALL BE REMOVED. EXISTING UNDERGROUND SERVICE CONDUIT SHALL BE FILLED WITH CONCRETE AND ABANDONED. SEAL AND PATCH PENETRATIONS. USE UL LISTED MATERIAL.
8. EXISTING POLE AND SERVICE EQUIPMENT SHALL BE REMOVED IN COORDINATION WITH THE UTILITY COMPANY.
9. CONTRACTOR SHALL REMOVE AND DELIVER ALL EXISTING PUMPS, MOTORS, CONTROLS, ETC. THAT MAY SALVAGEABLE TO THE SCOTT'S CREEK WWTP. ANY MATERIAL OR EQUIPMENT THAT IS NOT SALVAGEABLE OR THAT THE CITY DOES NOT WANT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF PROPERLY.
10. CONTRACTOR TO CLEAN AND FLUSH EXISTING WET WELL. ALL FLUSHINGS ARE TO BE PUMPED OUT OF THE WET WELL AND PROPERLY DISPOSED. FLUSHINGS MAY NOT BE DISCHARGED TO THE EXISTING OR THE NEW SEWER.
11. ONCE CLEAN, CONTRACTOR TO CONVERT EXISTING WET WELL TO A MANHOLE. EXISTING WET WELL TO BE FILLED AND TAMPED WITH SAND TO AN ELEVATION 6" BELOW THE NEW MANHOLE FLOOR. POUR 6" MINIMUM PORTLAND CEMENT TO FORM THE WET WELL FLOOR. CREATE A NEW U SHAPED FLOOR TROUGH IN THE WET WELL AND SLOPE AT A 1:12 GRADE TO THE MANHOLE WALL. (REFER TO CITY OF LAKELAND STANDARD SANITARY SEWER MANHOLE DETAIL). THE INVERT FORMING SYSTEM SHALL BE A–LOK TRU CONTOUR OR EQUAL.
12. AT CREEKSIDE MANOR LIFT STATION, CORE DRILL NEW OPENING TO RECEIVE 10" SEWER INTO EXISTING WET WELL AT ELEVATION SHOWN. SEAL WITH A–LOK SEAL OR EQUAL. SEAL THE INTERIOR ANNULAR SPACE AROUND THE PIPE WITH GROUT.
13. APPLY ASPHALTIC COATING OVER THE ENTIRE SURFACE OF THE WETWELL THAT IS EXPOSED DURING CONSTRUCTION. LINE INSIDE OF CONVERTED WET WELL PER SPECIFICATION FOR EXISTING MANHOLES.
14. UTILIZE ONE OF THE EXISTING OPENINGS IN THE EXISTING LID 6" DIAMETER OR LARGER TO INSTALL NEW GOOSENECK VENTILATION PIPE. THE OPENING OF THE PIPE SHALL EXTEND 12" ABOVE THE TOP OF THE CONCRETE SLAB.
15. AT OAKWOOD GROVE EXPOSE EXISTING 10" STUB OUT IDENTIFIED BY METAL T POST. REMOVE PLUGS AND CONTINUE WITH 10" DIA SEWER USING FERNCO CONNECTION.
16. REMOVE DISCHARGE LINE MINIMUM 5' BEYOND WET WELL. SEAL OPENING AT WET WELL WITH NONSHRINK GROUT. JET CLEAN REMAINING FORCE MAIN AND FILL WITH SAND OR NON SHRINK GROUT. CAP END PIPE AND SEAL OPENING AT DISCHARGE MANHOLE WHERE DIRECTED BY CITY.
17. REMOVAL OF EXIST. 36"ø STORM PIPE & HEADWALLS AT ENTRANCE TO LIFT STATION OFF CHAMBERS CHAPEL ROAD IS INCLUDED WITH BID ITEM FOR PUMP STATION DEMOLITION AND WET WELL CONVERSION.



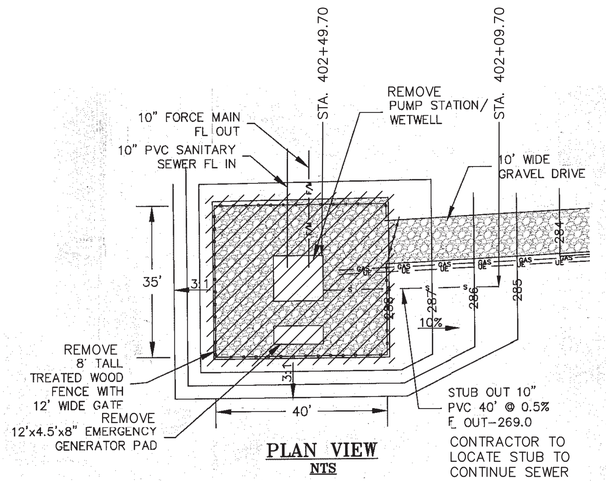
NTS

1 / C–123

CREEKSIDE MANOR LIFT STATION

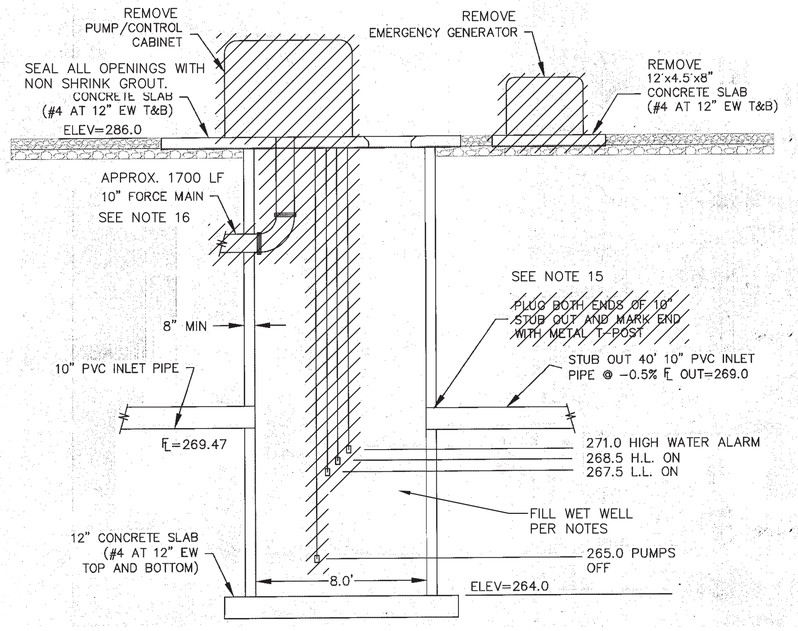
NTS.

ABANDON LIFT STATION AND CONVERT WET WELL TO MANHOLE PER NOTES.



PLAN VIEW

NTS



2 / C–123

OAKWOOD GROVE LIFT STATION

NTS

ABANDON LIFT STATION AND CONVERT WET WELL TO MANHOLE PER NOTES.

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–123.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
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CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

DEMOLITION PLAN LIFT STATIONS

DRAWING NO. C–123

SHEET 31 OF 87

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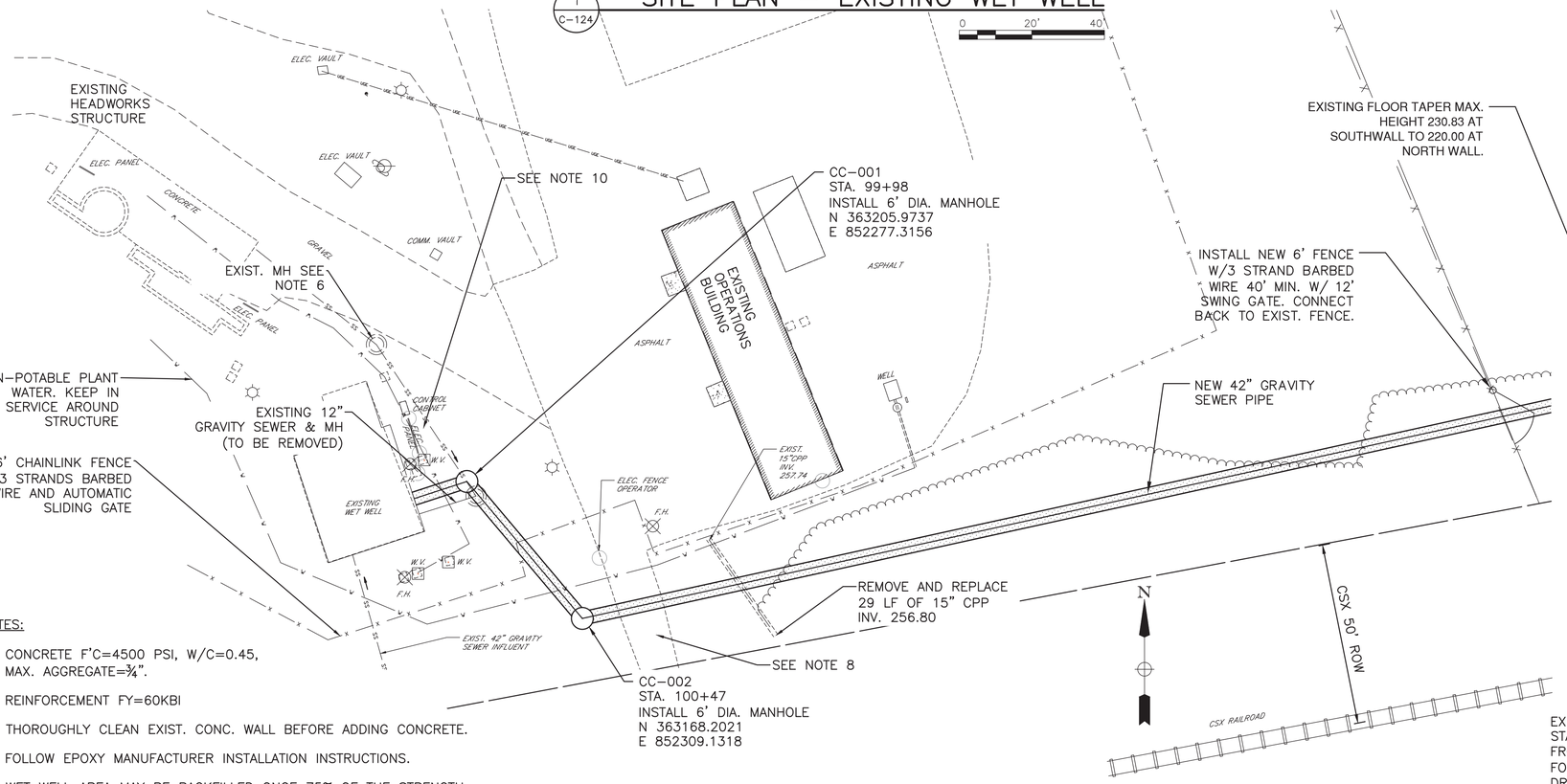
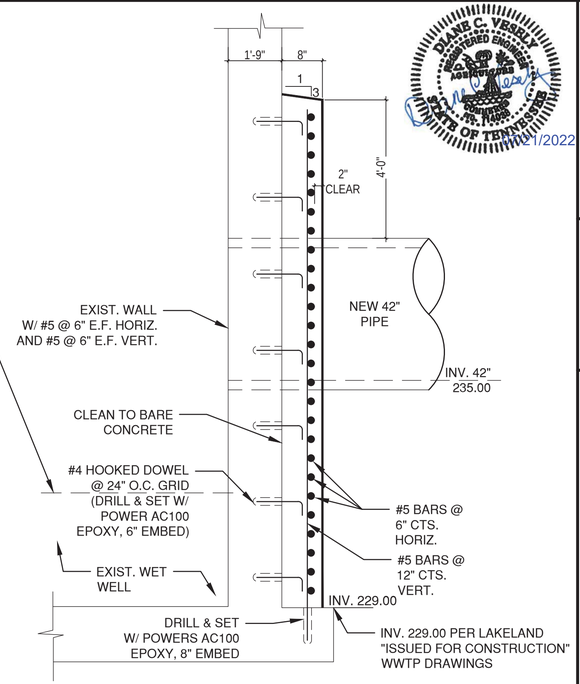
SCOTT'S CREEK WWTP
SITE PLAN – EXISTING WET WELL

1 / C–124

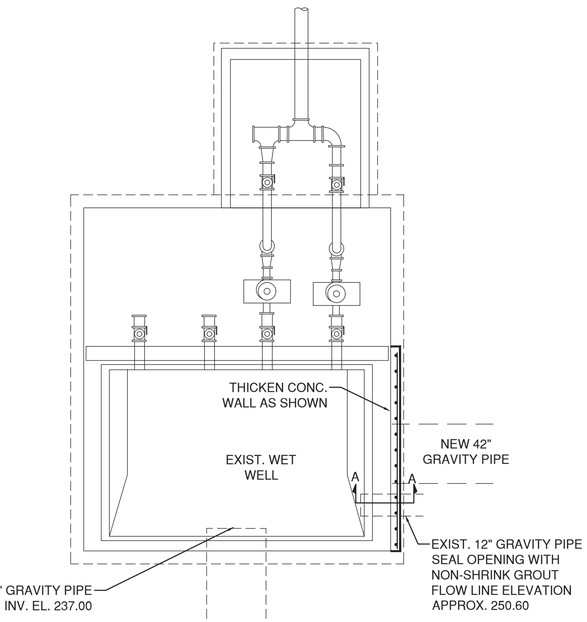


NOTES:

1. CONCRETE F'C=4500 PSI, W/C=0.45, MAX. AGGREGATE=¾".
2. REINFORCEMENT FY=60KBI
3. THOROUGHLY CLEAN EXIST. CONC. WALL BEFORE ADDING CONCRETE.
4. FOLLOW EPOXY MANUFACTURER INSTALLATION INSTRUCTIONS.
5. WET WELL AREA MAY BE BACKFILLED ONCE 75% OF THE STRENGTH SPECIFIED IN NOTE 1 IS DEMONSTRATED THROUGH CYLINDER BREAKS.
6. CONTRACTOR TO STOP EXISTING STATION INTERNAL FLOWS DURING CONSTRUCTION AT WWTP AND MH C–001 BY PLUGGING THIS MH. PROVIDE 1 WEEK NOTIFICATION TO CITY PLANT PERSONNEL PRIOR TO PLUGGING MH. RESTORE FLOW IN EXISTING MH ONCE MH CC–001 IS APPROVED AND HAS BEEN PLUGGED.
7. THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE LAKELAND CITY ENGINEER AND SUBMIT A SEQUENCE OF CONSTRUCTION ADDRESSING ALL WORK ON THE SCOTT'S CREEK WWTP SITE INCLUDING DEWATERING, SHORING, PIPE INSTALLATION, PROTECTION OF EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO UNDERGROUND WATER, SEWERS, AND ELECTRIC, OVERHEAD ELECTRIC, OPERATING GATE.
8. CONTRACTOR MAY NOT BLOCK EXISTING ENTRANCE EXCEPT DURING INSTALLATION OF SEWER CROSSING THE DRIVEWAY. CONTRACTOR WILL COORDINATE THIS CROSSING WITH THE CITY OF LAKELAND WWTP OPERATOR SO THAT OPERATIONS REQUIRING TRUCK ACCESS MAY BE LIMITED. THE CONTRACTOR WILL KEEP STEEL PLATES OR MAINTAIN OTHER PROVISIONS FOR VEHICLE ACCESS AT THE JOB SITE INCASE EMERGENCY ACCESS TO THE WWTP IS REQUIRED DURING CONSTRUCTION. THE ACCESS DRIVEWAY MAY NOT BE BLOCKED FOR MORE THAN 8 HOURS.
9. THE EXISTING INFLUENT WET WELL SHALL REMAIN IN OPERATION DURING CONSTRUCTION. THE CONTRACTOR MAY BYPASS PUMP FROM THE EXISTING WET WELL TO THE HEADWORKS STRUCTURE TO LOWER THE ELEVATION IN THE WET WELL DURING CONSTRUCTION. THE DESIGN FLOW RATE FOR THE STATION IS 1750 GALLONS PER MINUTE (GPM). THE INSTANTANEOUS PEAK FLOW RECORDED AT THE STATION (THROUGH 5/2019) IS 1,500 GPM.
10. CONTRACTOR SHALL HAND DIG TO EXPOSE ELECTRIC CONDUITS ON THE EAST FACE OF THE EXISTING WET WELL WALL THAT EXTEND FROM THE EXISTING WET WELL TO THE MOTOR CONTROL CENTER IN THE OPERATIONS BUILDING.
11. AFTER CONSTRUCTION OF THE WET WELL CONNECTION AND INSTALLATION OF MH CC–001 AND CC–002 (USING 42" IN PIPE DUCKBILL VALVE), TEMPORARILY PLUG THE NEW SEWER BETWEEN MH CC–001 AND CC–002. SEWER TO REMAIN PLUGGED UNTIL CONSTRUCTION OF ALL 42" SEWER OR WHEN AUTHORIZED BY THE CITY OF LAKELAND ENGINEER ONCE REMOVED, VALVE TO BE TURNED OVER TO THE CITY.
12. DURING CONSTRUCTION CONTRACTOR TO MAINTAIN WATER LEVEL AT 1 LF BELOW THE BOTTOM OF THE EXCAVATION.

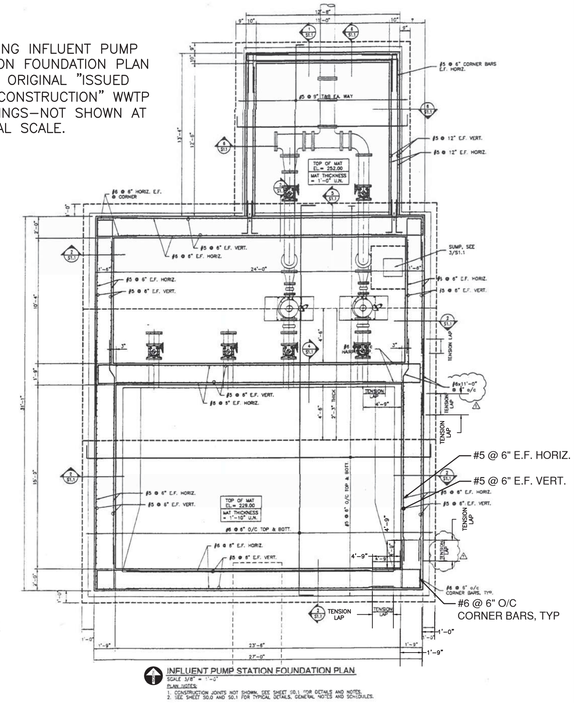


3 / C–124 SECTION A–A
NTS



2 / C–124 PLAN
NTS

EXISTING INFLUENT PUMP STATION FOUNDATION PLAN FROM ORIGINAL "ISSUED FOR CONSTRUCTION" WWTP DRAWINGS–NOT SHOWN AT ACTUAL SCALE.



PLAN NOTES (REPEATED FOR CLARITY):

1. CONSTRUCTION JOINTS NOT SHOWN, SEE SHEET S0.1 FOR DETAILS AND NOTES.

2. SEE SHEET S0.0 AND S0.1 FOR TYPICAL DETAILS, GENERAL NOTES AND SCHEDULES.

3 / C–124 EXISTING INFLUENT PS
NTS

DIANE C. VESELY — REGISTERED ENGINEER — STATE OF TENNESSEE — 7/21/2022

JEFFREY KAMINSKI — REGISTERED ENGINEER — STATE OF TENNESSEE — 7-21-2022

BUCHART HORN — ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
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CHECKED BY:	DV
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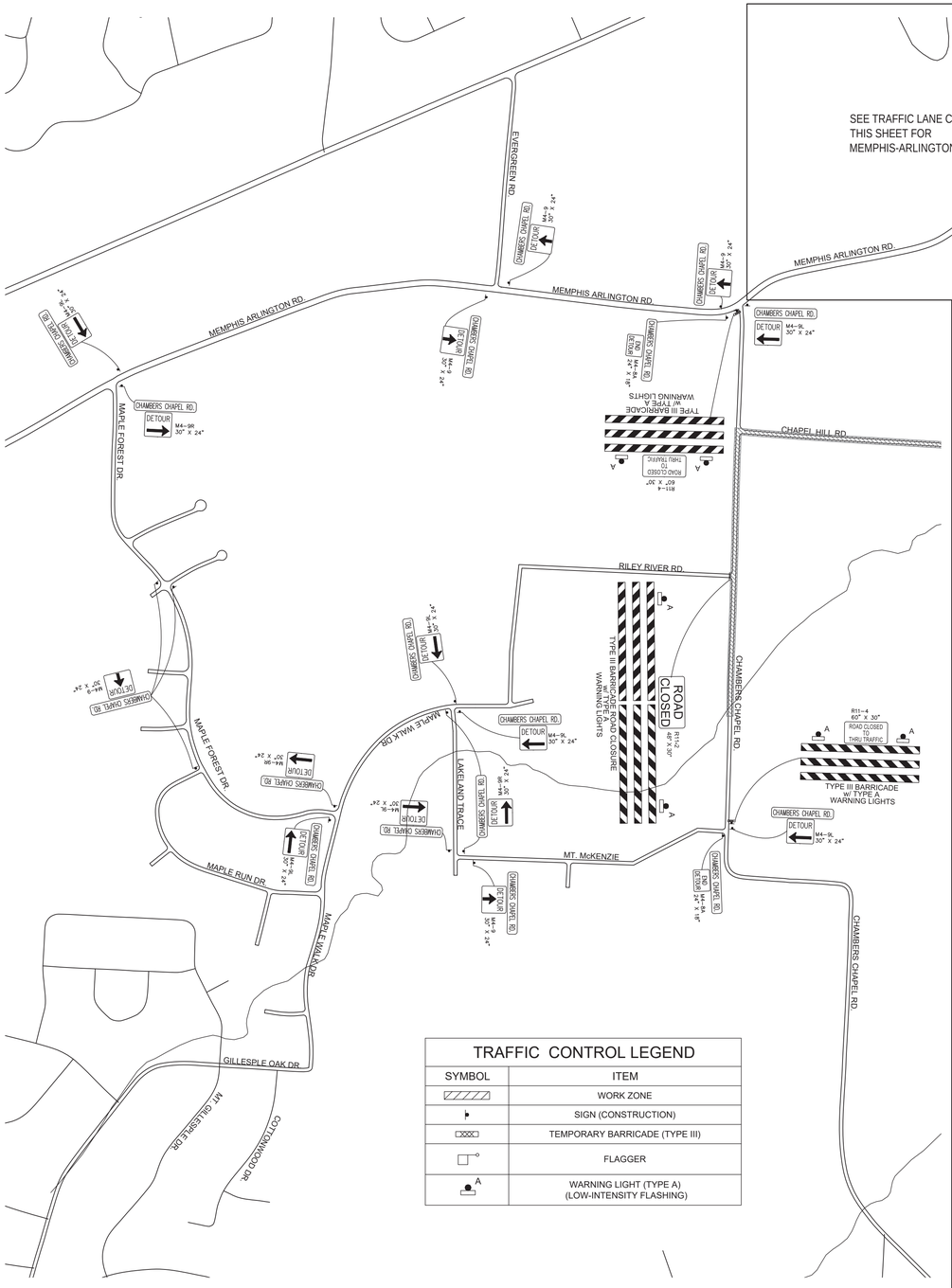
DRAWING SHALL NOT BE SCALED.

WET WELL SITE PLAN & DETAILS

DRAWING NO. C–124

SHEET 32 OF 87

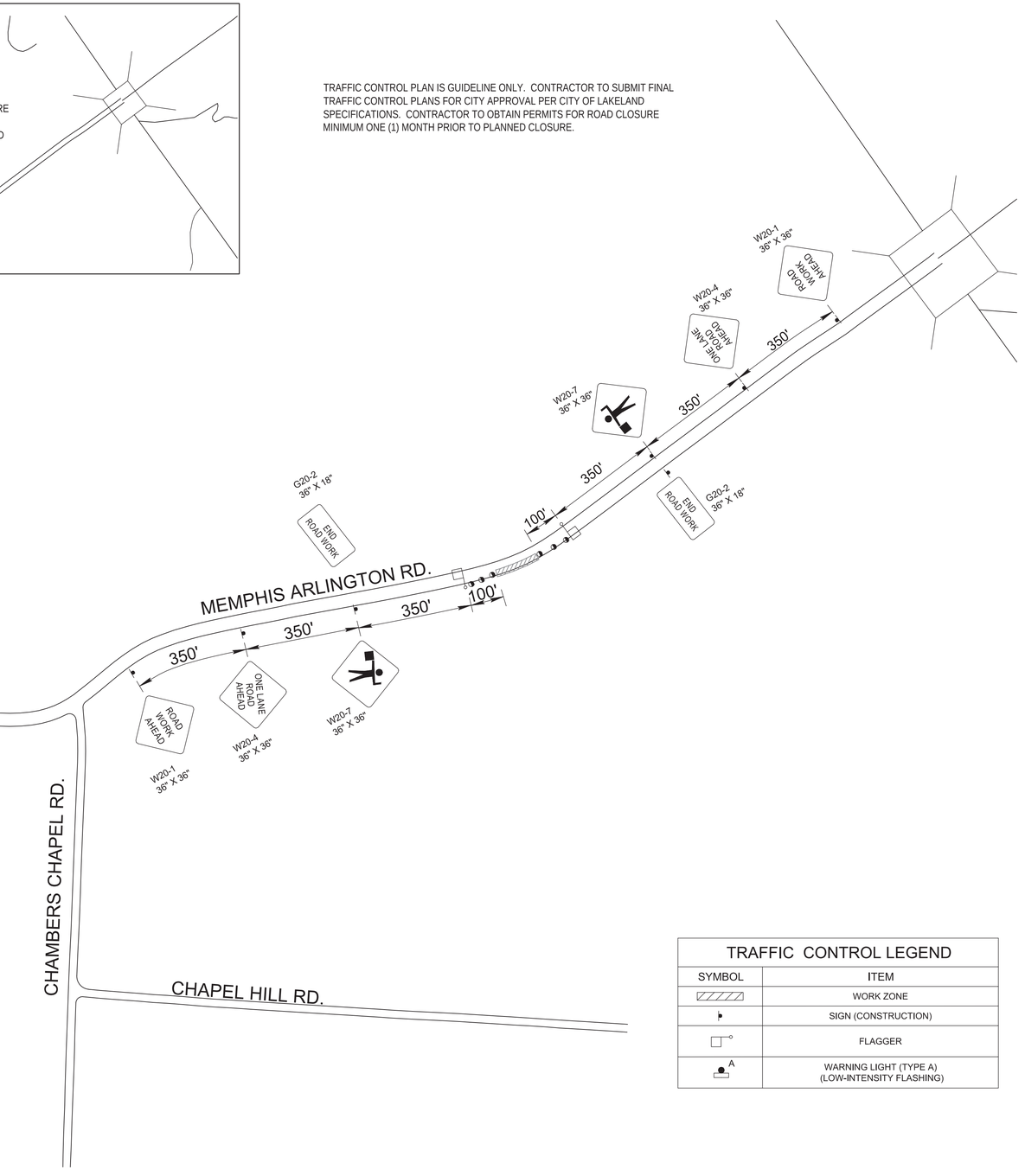


TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	TEMPORARY BARRICADE (TYPE III)
	FLAGGER
A	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)

1 C-125 TRAFFIC CONTROL (DETOUR)

0 500' 1000'

TRAFFIC CONTROL PLAN IS GUIDELINE ONLY. CONTRACTOR TO SUBMIT FINAL TRAFFIC CONTROL PLANS FOR CITY APPROVAL PER CITY OF LAKELAND SPECIFICATIONS. CONTRACTOR TO OBTAIN PERMITS FOR ROAD CLOSURE MINIMUM ONE (1) MONTH PRIOR TO PLANNED CLOSURE.



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLAGGER
A	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)

2 C-125 TRAFFIC LANE CLOSURE

0 200' 400'

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

STATE OF TENNESSEE — REGISTERED ENGINEER — DAVID VERBECK — 10/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
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DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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TRAFFIC CONTROL PLAN

DRAWING NO. C-125

SHEET 33 OF 87

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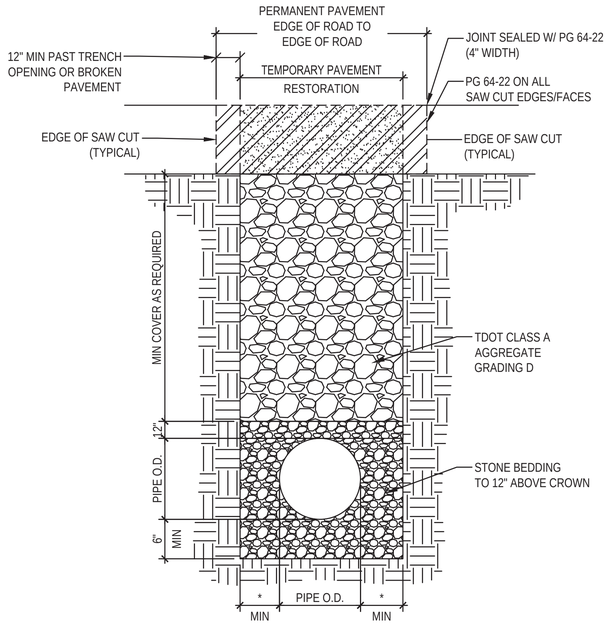


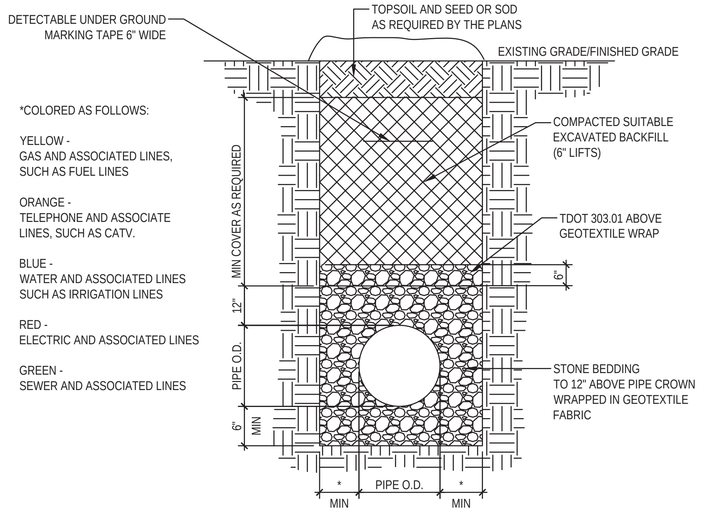
NOTE:
1. ADDITIONAL CONSIDERATIONS MAY BE REQUIRED BY SITE AND SOIL CONDITIONS OR PIPE MANUFACTURER'S RECOMMENDATIONS.

2. WRAP ENTIRE TRENCH IN GEOTEXTILE FABRIC.

1 TYPICAL PIPE/UTILITY CROSSING TRENCH DETAILPAVED AREAS

NOT TO SCALE

MOUND SOIL 6" ABOVE DITCH.
REPLACE AS DITCH SETTLES



*COLORED AS FOLLOWS:

YELLOW -
GAS AND ASSOCIATED LINES,
SUCH AS FUEL LINES

ORANGE -
TELEPHONE AND ASSOCIATE
LINES, SUCH AS CATV.

BLUE -
WATER AND ASSOCIATED LINES
SUCH AS IRRIGATION LINES

RED -
ELECTRIC AND ASSOCIATED LINES

GREEN -
SEWER AND ASSOCIATED LINES

NOTE:
ADDITIONAL CONSIDERATIONS MAY BE REQUIRED BY SITE AND SOIL CONDITIONS OR PIPE MANUFACTURER'S RECOMMENDATIONS.

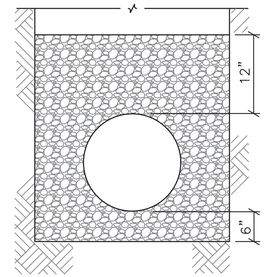
* PIPES < 30" DIA. : 12" MIN.
PIPES > 30" DIA. : 0.4 X PIPE O.D. MIN.

WHERE ADDITIONAL BEDDING WIDTH IS SPECIFIED, PROVIDE 2.2' BEDDING MATERIAL ON EACH SIDE OF PIPE. ALL BEDDING TO BE WRAPPED IN GEOTEXTILE FABRIC.

ALL PIPE WITH ADDITIONAL BEDDING WIDTH SHALL BE SN72.

2 TYPICAL PIPE/UTILITY CROSSING TRENCH DETAIL NON-PAVEMENT AREAS

NOT TO SCALE



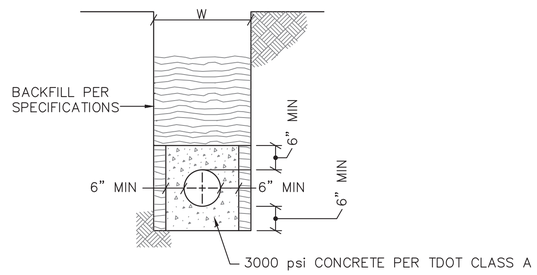
NOTES:

BEDDING

1. TRENCH BOTTOM TO BE FREE OF WATER BEFORE PLACING BEDDING: MAINTAIN WATER LEVEL 1' BELOW BOTTOM OF THE EXCAVATION.
2. SHAPE RECESSES FOR BELL OF PIPE BY HAND.
3. BACKFILL ABOVE BEDDING WITH SPECIFIED BACKFILL MATERIAL.
4. ALL BEDDING TO BE AASHTO #8. FOR PIPES LESS THAN OR EQUAL TO 18" DIAMETER.
5. ALL BEDDING FOR PIPES GREATER THAN 18" DIAMETER TO COMPLY WITH CITY OF LAKELAND BEDDING MIX.

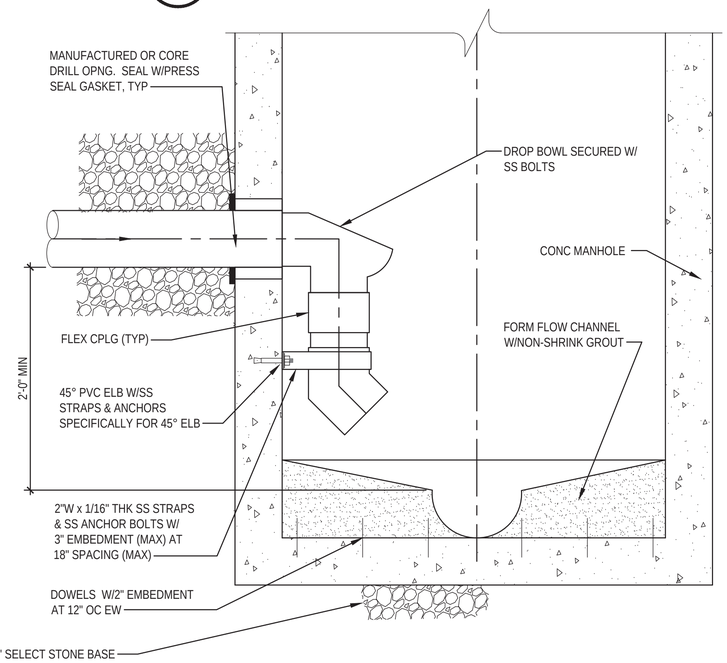
3 TYPE IV BEDDING DETAIL

NOT TO SCALE



4 CONCRETE ENCASEMENT DETAIL

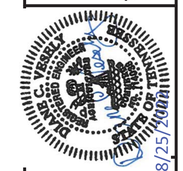
NOT TO SCALE



5 INSIDE DROP MANHOLE W/DROP BOWL DETAIL

NOT TO SCALE

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS



CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
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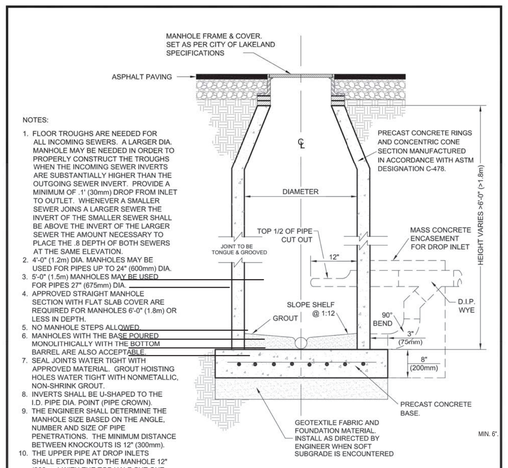
DRAWING SHALL NOT BE SCALED.

STANDARD
DETAILS

DRAWING NO.
C-501

SHEET 34 OF 87



NOTES:

1. FLOOR TROUGHS ARE NEEDED FOR ALL INCOMING SEWERS. A LARGER DIA. MANHOLE MAY BE NEEDED IN ORDER TO PROPERLY CONSTRUCT THE TROUGHS WHEN THE INCOMING SEWER INVERTS ARE SUBSTANTIALLY HIGHER THAN THE OUTGOING SEWER INVERT. PROVIDE A MINIMUM OF 1' (30mm) DROP FROM INLET TO OUTLET. WHENEVER A SMALLER SEWER JOINS A LARGER SEWER THE INVERT OF THE SMALLER SEWER SHALL BE ABOVE THE INVERT OF THE LARGER SEWER THE AMOUNT NECESSARY TO PLACE THE .8 DEPTH OF BOTH SEWERS AT THE SAME ELEVATION.
2. 4'-0" (1.2m) DIA. MANHOLES MAY BE USED FOR PIPES UP TO 24" (600mm) DIA.
3. 5'-0" (1.5m) MANHOLES MAY BE USED FOR PIPES 27" (675mm) DIA.
4. APPROVED STRAIGHT MANHOLE SECTION WITH FLAT SLAB COVER ARE REQUIRED FOR MANHOLES 6'-0" (1.8m) OR LESS IN DEPTH.
5. NO MANHOLE STEPS ALLOWED.
6. MANHOLES WITH THE BASE POURED MONOLITHICALLY WITH THE BOTTOM BARREL ARE ALSO ACCEPTABLE.
7. SEAL JOINTS WATER TIGHT WITH APPROVED MATERIAL. GROUT HOISTING HOLES WATER TIGHT WITH NONMETALLIC, NON-SHRINK GROUT.
8. INVERTS SHALL BE U-SHAPED TO THE I.D. PIPE DIA. POINT (PIPE CROWN).
9. THE ENGINEER SHALL DETERMINE THE MANHOLE SIZE BASED ON THE ANGLE, NUMBER AND SIZE OF PIPE PENETRATIONS. THE MINIMUM DISTANCE BETWEEN KNOCKOUTS IS 12" (300mm).
10. THE UPPER PIPE AT DROP INLETS SHALL EXTEND INTO THE MANHOLE 12" (300mm) WITH THE TOP HALF CUT OUT.
11. ALL MANHOLES AT DOWNSTREAM END OF SEWER FORCE MAIN SHALL RECEIVE AN INTERIOR COATING PER CITY OF LAKELAND SPECIFICATIONS.
12. ALL MANHOLES SHALL HAVE ASPHALTIC BLACK COATING APPLIED BY BRUSH OR LOW PRESSURE SPRAYER.
13. PROVIDE BOOT AROUND PIPE.

CITY OF LAKELAND ENGINEERING DIVISION

STANDARD SANITARY SEWER MANHOLE DETAIL
FOR MANHOLE DEPTH >6' BASE TO LID

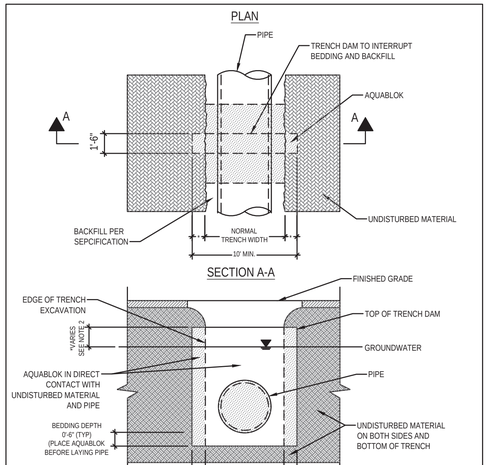
REV.	DESCRIPTION	DATE
1	ORIGINAL ISSUE	8/2008

STANDARD SANITARY SEWER MANHOLE DETAIL

(FOR MANHOLE DEPTH >6' BASE TO LID)

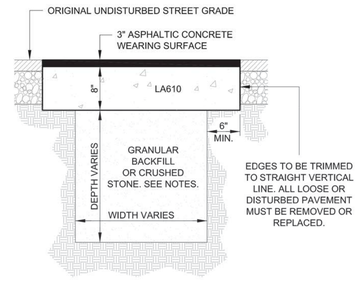
NOT TO SCALE

4' DIAMETER MANHOLE AND 5' DIAMETER MANHOLE (IN ROADS)



NOTES:

1. KEY (*) ON EACH SIDE OF TRENCH IS REQUIRED AND SHALL EXTEND 29" BEYOND UNDISTURBED MATERIAL. MINIMUM TRENCH WIDTH = 10'.
2. TOP OF TRENCH DAM SHALL EXTEND A MINIMUM OF 5'-0" ABOVE THE GROUND WATER LEVEL, AS DETERMINED BY TEH NEAREST BORING OR BY THE ENGINEER, BUT SHALL NOT EXCEED A DEPTH OF 1'-0" BELOW FINISHED GRADE.
3. TRENCH DAMS SHALL BE INSTALLED AS INDICATED ON THE CONTRACT DRAWINGS OR AS DIRECTED BY THE ENGINEER.
4. AquaBlok - COMPOSITE PARTICLE SYSTEM, 3401 GLENDALE AVE., SUITE 300 TOLEDO, OHIO 43614 PH-1800-688-2649 www.aquablok.com



NOTES:

1. SAND MAY BE USED AS BACKFILL MATERIAL IN TRENCHES 6' DEEP OR LESS.
2. ANY TRENCH GREATER THAN 6' IN DEPTH SHALL BE REQUIRED TO BE BACKFILLED WITH CR610 CRUSHED STONE OR AS DIRECTED BY THE CITY ENGINEER.
3. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY.

CITY OF LAKELAND ENGINEERING DIVISION

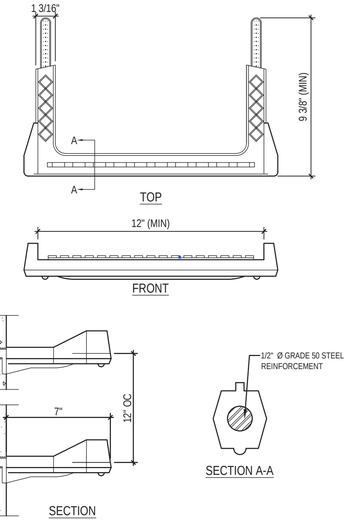
TYPICAL PAVEMENT REPAIR DETAIL

REV.	DESCRIPTION	DATE
1	ORIGINAL ISSUE	8/2008
2	LA610 ADDED	1/2011

TYPICAL PAVEMENT REPAIR DETAIL

NOT TO SCALE

TYPICAL PAVEMENT REPAIR DETAIL APPLICABLE TO WWTP ENTRANCE, EVERGREEN ROAD, MEMPHIS-ARLINGTON ROAD, BILLY B. MAY & WIFE DRIVEWAYS, CHAPEL HILL ROAD (FULL WIDTH), AND CHAMBERS CHAPEL ROAD (FULL WIDTH).



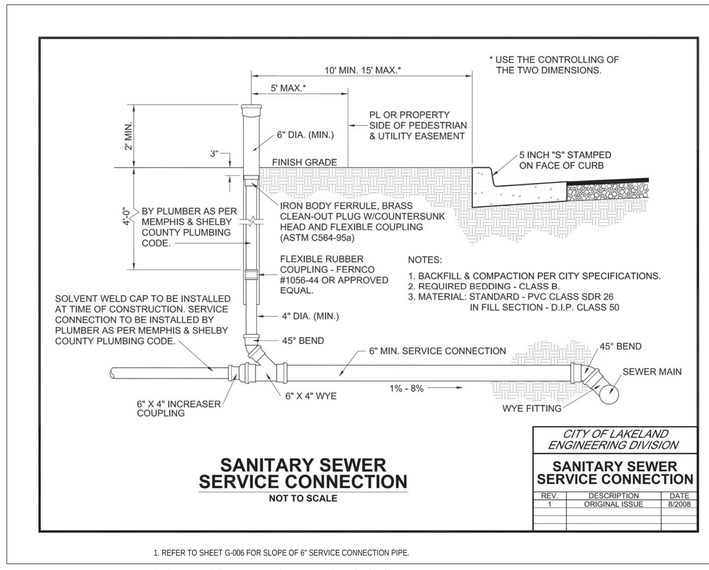
NOTES:

1. MANHOLE STEPS TO BE CO-POLYMER POLYPROPOLENE PLASTIC.
2. DISTANCE FROM RIM OF MANHOLE TO TOP STEP SHALL NOT EXCEED 2'-0".
3. DISTANCE FROM BOTTOM STEP TO FLOOR OF MANHOLE SHALL NOT EXCEED 2'-0".

1 MANHOLE STEP DETAIL

NOT TO SCALE

SIZE OF SEWER	(MIN) DROP	NOTES
8"	2'–8"	* – INDICATES DIMENSIONS FROM FABRICATED FITTINGS
10"	2'–10"	
12"	3'–3"	
*15"	6'–8"	



CITY OF LAKELAND ENGINEERING DIVISION

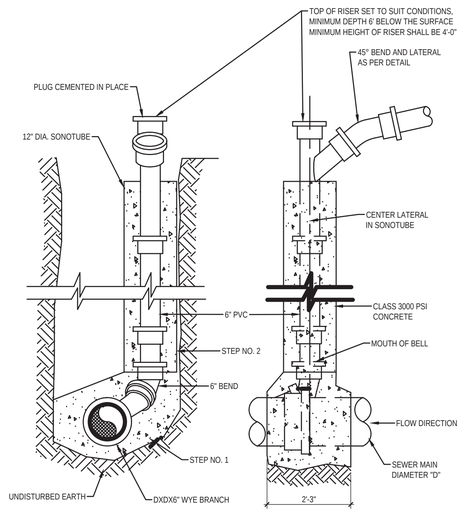
SANITARY SEWER SERVICE CONNECTION

REV.	DESCRIPTION	DATE
1	ORIGINAL ISSUE	8/2008

SANITARY SEWER SERVICE CONNECTION

NOT TO SCALE

1. REFER TO SHEET G-006 FOR SLOPE OF 6" SERVICE CONNECTION PIPE.
2. FOR LATERALS GREATER THAN 16 FT. DEEP, PROVIDE SDR21 FOR ENTIRE LENGTH OF LATERAL.
3. MAX. DEPTH OF SERVICE LATERAL AT PROPERTY LINE IS 11 FT. WHERE DEPTH CANNOT BE ACHIEVED AT 8% SLOPE, FOLLOW DEEP CUT LATERAL DETAIL AND MAINTAIN 8% SLOPE.

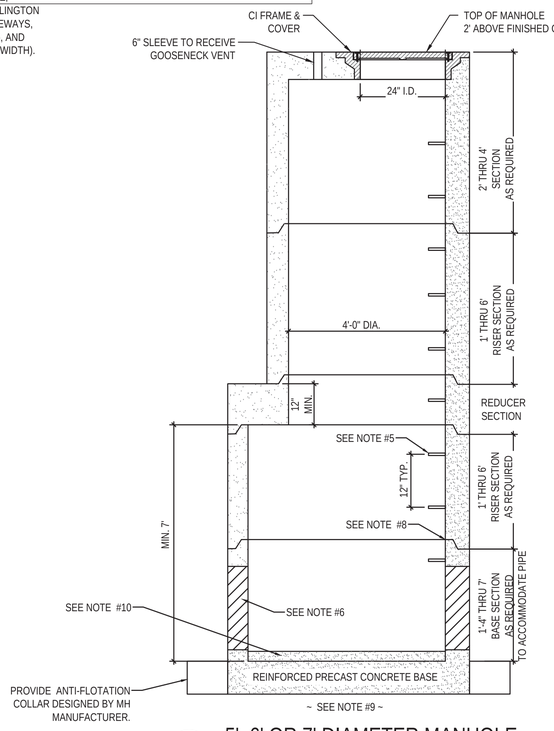


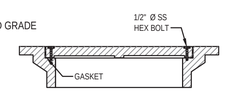
METHOD OF CONSTRUCTION:

ONCE WYE HAS BEEN INSTALLED, INSERT 6" BEND, AND POUR CONCRETE TO 1" BELOW MOUTH OF BELL. PERMIT CONCRETE TO SET UP FOR A PERIOD OF 24 HOURS BEFORE INSERTION OF RISER PIPE, AND CONCRETE ENCASEMENT.

2 DEEP CUT LATERAL

NOT TO SCALE





WATERTIGHT MANHOLE COVER
WITH HEX BOLT & GASKET

MATERIALS & FEATURES:

1. MANHOLE TO CONFORM TO LATEST ASTM C478 SPECIFICATIONS FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
2. CONCRETE COMPRESSIVE STRENGTH 4,000 PSI MIN.
3. STEEL REINFORCING DESIGNED TO CONFORM TO THE REQUIREMENTS OF ASTM C 478 AND SHALL UTILIZE GRADE 60 RE-BARS CONFORMING TO THE REQUIREMENTS OF ASTM A 615 OR WWF CONFORMING TO THE REQUIREMENTS OF ASTM A 185 OR DRAWN WIRE CONFORMING TO THE REQUIREMENTS OF A82 OR A COMBINATION THEREOF.
4. DESIGNED H-20 LOADING.
5. STEPS SHALL BE STEEL REINFORCED COPOLYMER POLYPROPYLENE AND MEET THE REQUIREMENTS OF ASTM C 478.
6. PIPE PENETRATION TO BE AS PER JOB REQUIREMENTS AND SPECIFIC PIPE MATERAL AND TYPE. PIPE TO BE INSTALLED BY CONTRACTOR.
7. CAST IRON RING AND COVER TO BE AS PER SPECIFICATIONS.
8. JOINTS TO BE SEALED WITH PREFORMED BUTYL RUBBER JOINT SEALANT MEETING REQUIREMENTS OF ASTM C990.
9. PROVIDE GEOTEXTILE FABRIC AND MINIMUM 6" CRUSHED STONE UNDER PRECAST BASE. PROVIDE FOUNDATION MATERIAL AS DIRECTED BY ENGINEER WHEN FOUNDATION IS SOFT.
10. FORM FLOW CHANNEL WITH NON SHRINK GROUT. SLOPE SHELF @1:12

3 5', 6' OR 7' DIAMETER MANHOLE

NOT TO SCALE

BUCHART HORN
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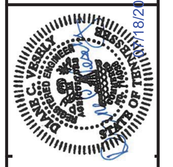


CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

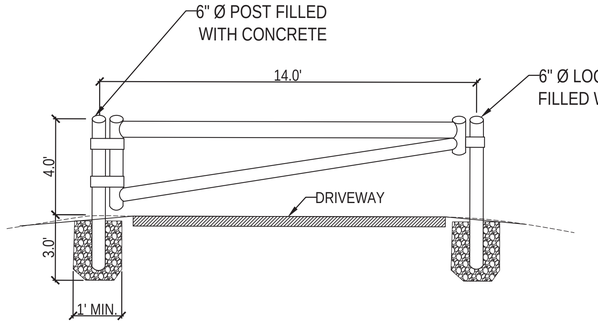
NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–502.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

STANDARD DETAILS

DRAWING NO. C–502

SHEET 35 OF 87

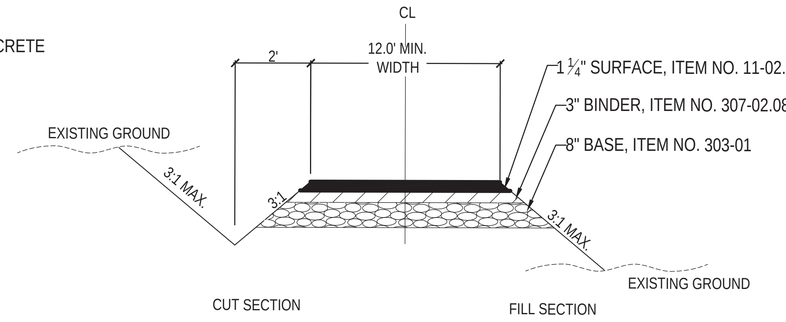


1 C–503

GATE DETAIL @ STA. 209+83.74

NTS

1. PROVIDE 4000 psi CONCRETE FOOTING.
2. EXPOSED PIPE TO BE PAINTED WITH RUST PREVENTATIVE PAINT – SAFETY YELLOW.
3. ATTACH GATE TO POST AT PIVOT POINT USING 4.5" WIDE BY ⅜" MINIMUM STEEL PLATE WELDED TO POST TOP & BOTTOM.
4. CONTRACTOR TO PROVIDE SHOP DRAWING FOR APPROVAL.



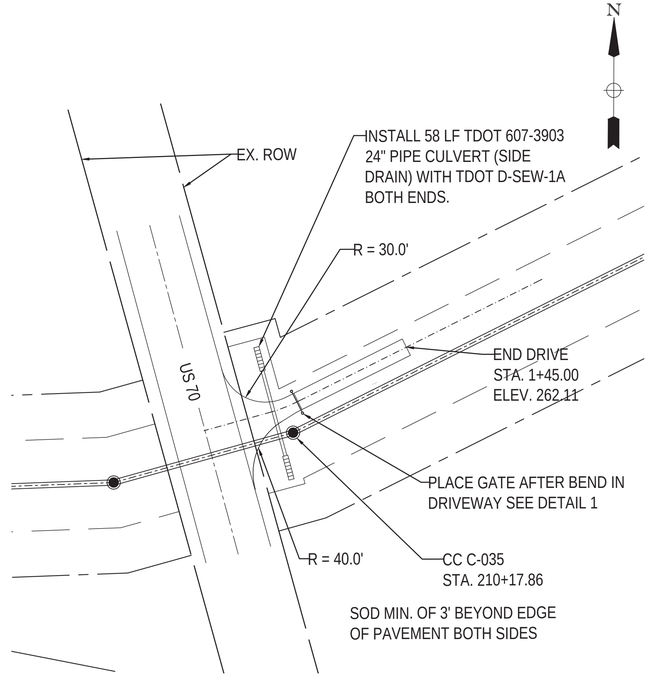
3 C–503

DRIVEWAY TYP. SECTION

FROM EDGE OF PAVEMENT TO THE GATE

NTS

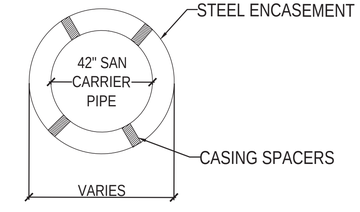
NOTE:
MAINTAIN 6:1 MAXIMUM SLOPE FROM EDGE OF ROAD TO PROPOSED PIPE CULVERT.



5 C–503

DRIVEWAY PLAN

NTS



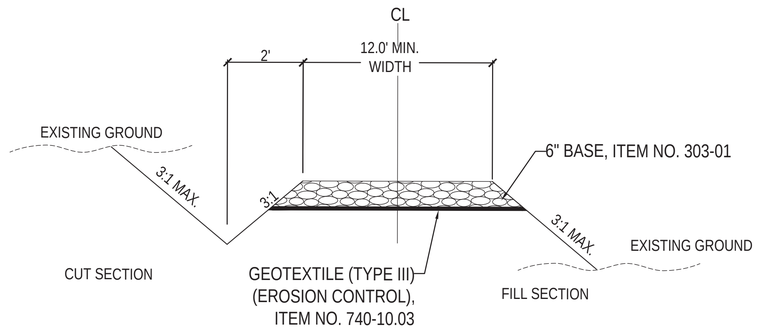
2 C–503

BORED PIPE ENCASEMENT

NTS

NOTES:

1. SEE CROSSING LOCATION FOR CASING PIPE DIAMETER AND WALL THICKNESS.
2. SEE CROSSING LOCATION FOR CARRIER PIPE MATERIAL.
3. ALL HOLES OR VOIDS BETWEEN THE CARRIER PIPE AND UNDISTURBED EARTH ARE TO BE FILLED WITH GROUT.
4. FILL THE ANNULAR SPACE BETWEEN THE CARRIER PIPE AND CASING PIPE WITH SAND.
5. SEAL CASING PIPE ENDS.
6. ALL MATERIALS TO BE APPROVED BY PERMITTING ENTITY (CSX RAILROAD/TDOT)

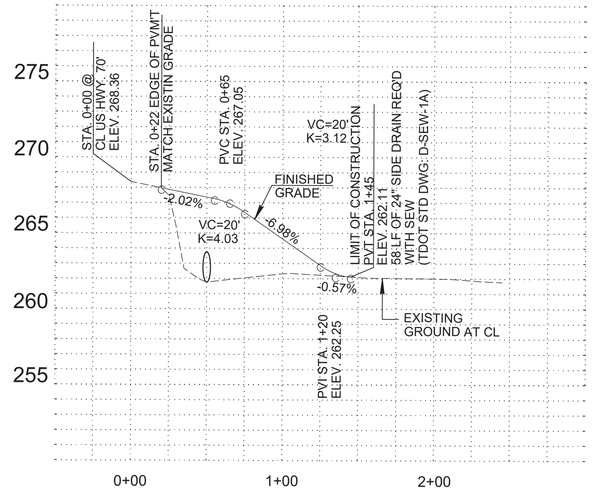


4 C–503

DRIVEWAY TYP. SECTION

FROM THE GATE TO LIMIT OF CONSTRUCTION

NTS



6 C–503

DRIVEWAY PROFILE

NTS

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202–00
CAD FILE:	C–503.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

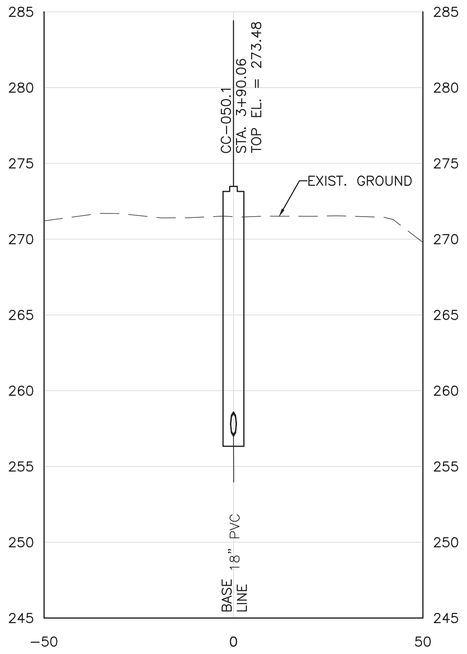
DRIVEWAY DETAILS

DRAWING NO. C–503

SHEET 36 OF 87

J:\PROJ\77202–00\CADD\Eng\Sheets\C–503.dwg 6/21/2022 8:53:26 AM

STA. 3+90.06



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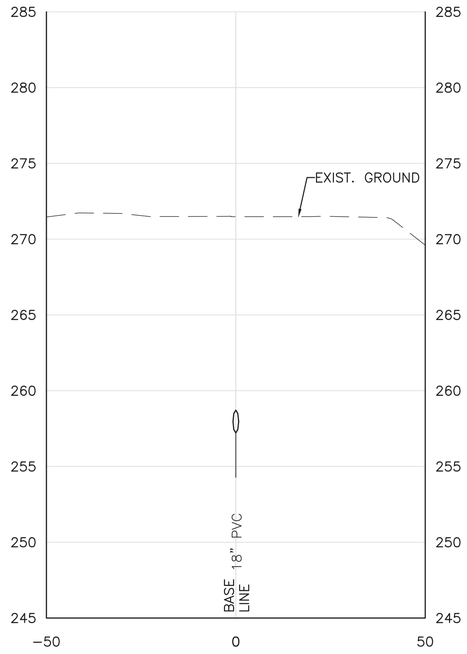

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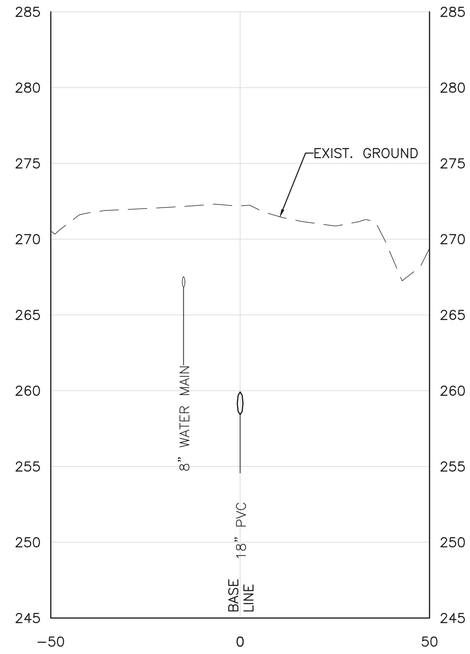

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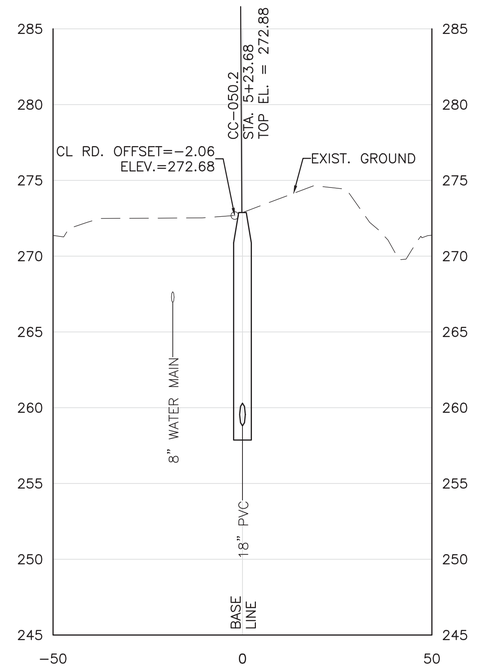

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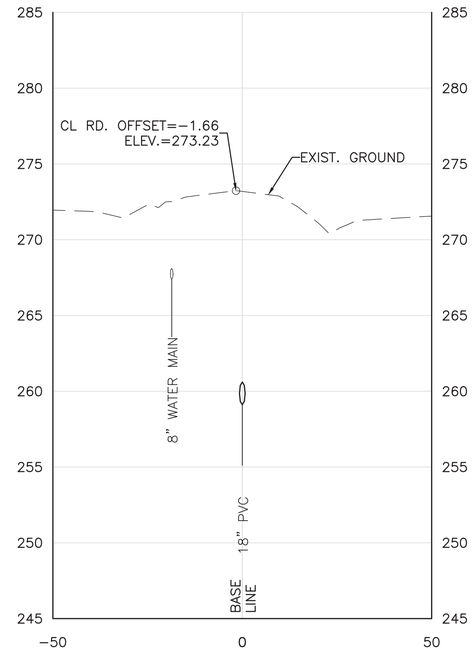

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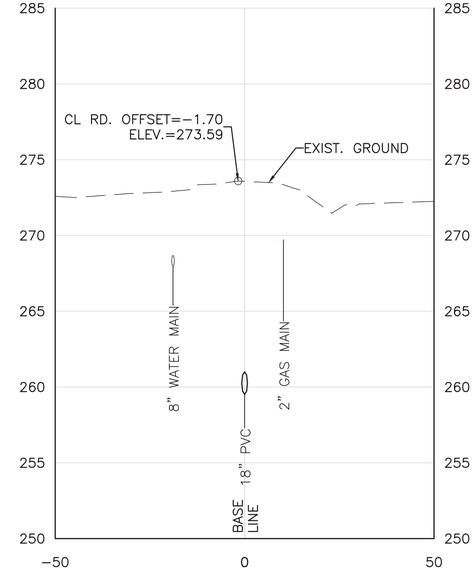

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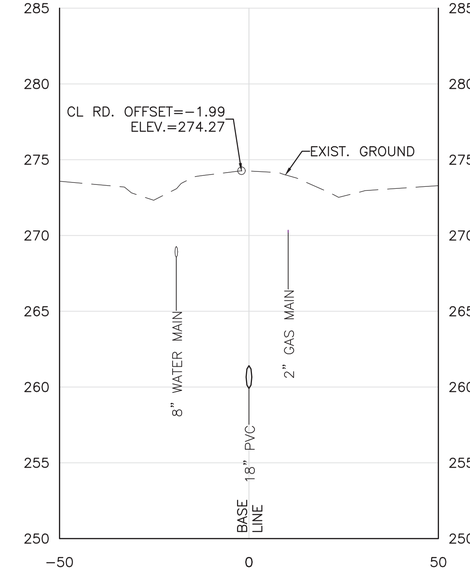

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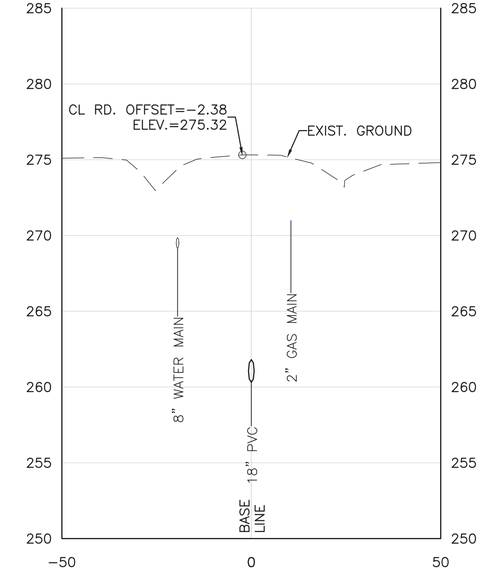

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-701.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

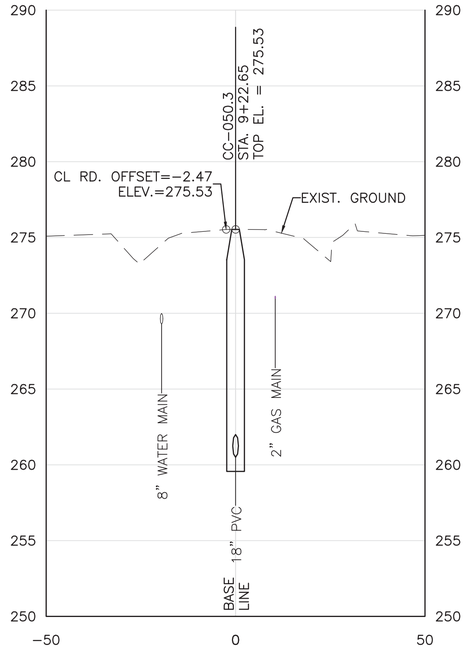
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

CROSS SECTIONS
STA. 3+90.06
TO
STA. 9+00

DRAWING NO.
C-701

SHEET 37 OF 87

STA. 9+22.65



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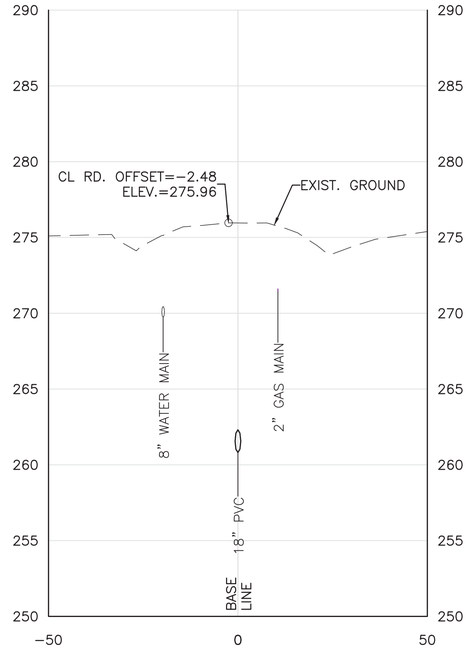

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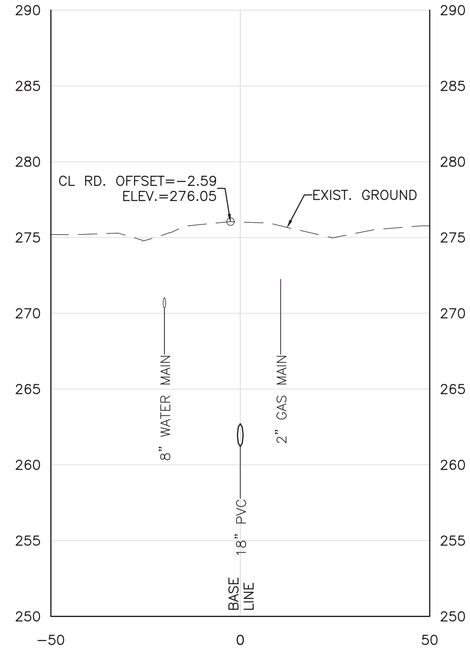

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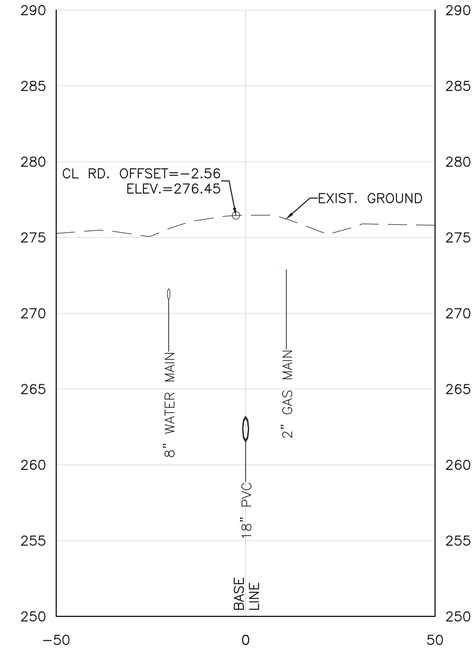

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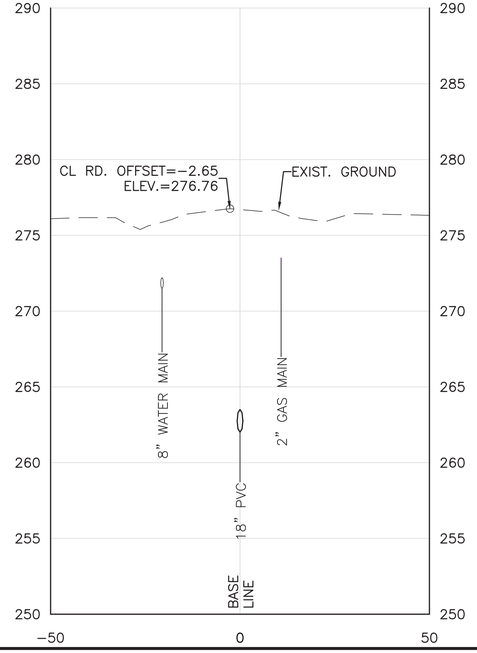

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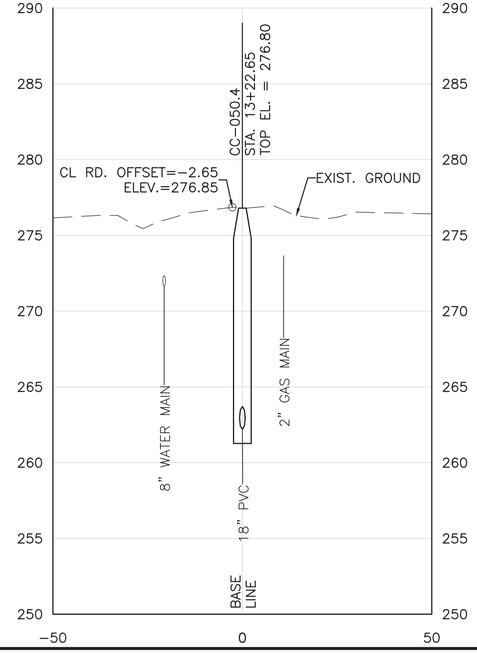

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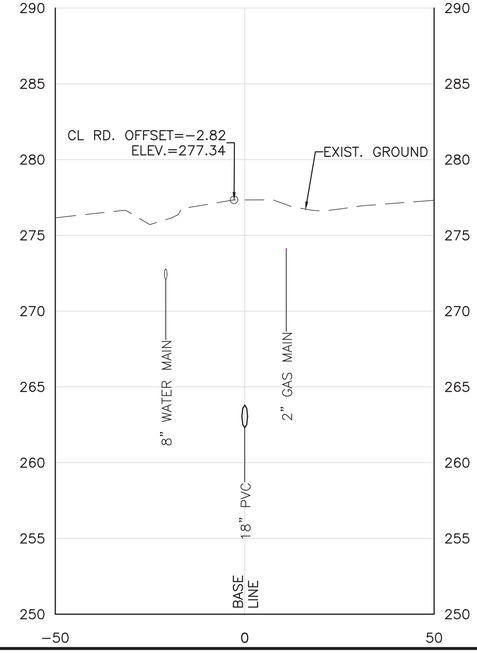

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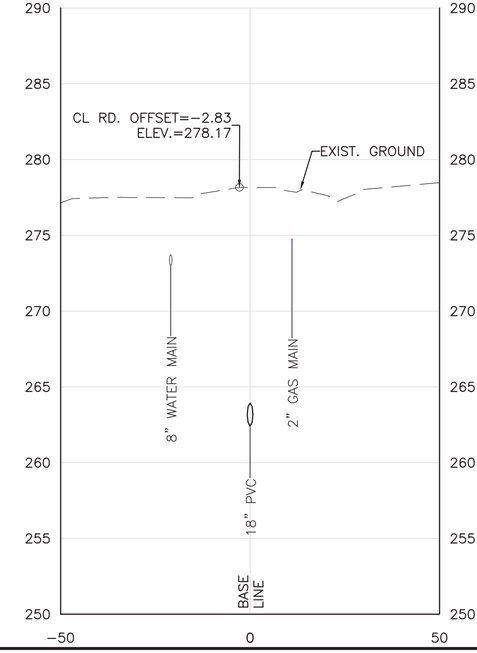

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

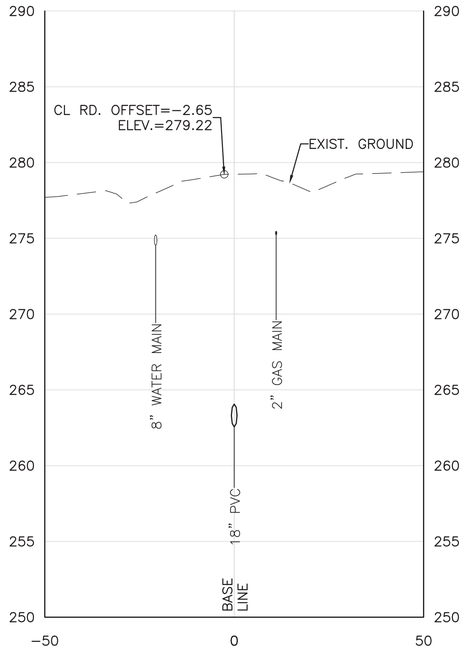
PROJECT NO.:	77202−00
CAD FILE:	C−702.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

CROSS SECTIONS
STA. 9+22.65
TO
STA. 15+00

DRAWING NO.
C−702

STA. 16+00.00



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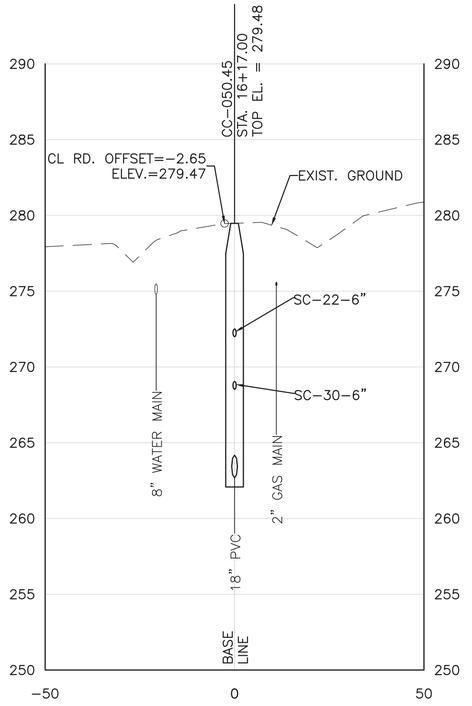

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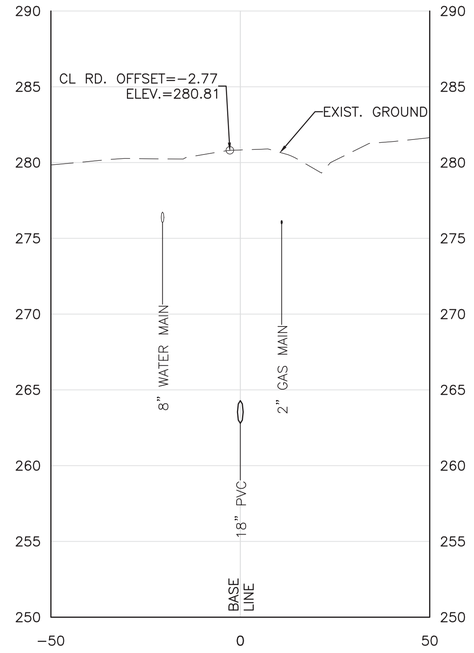

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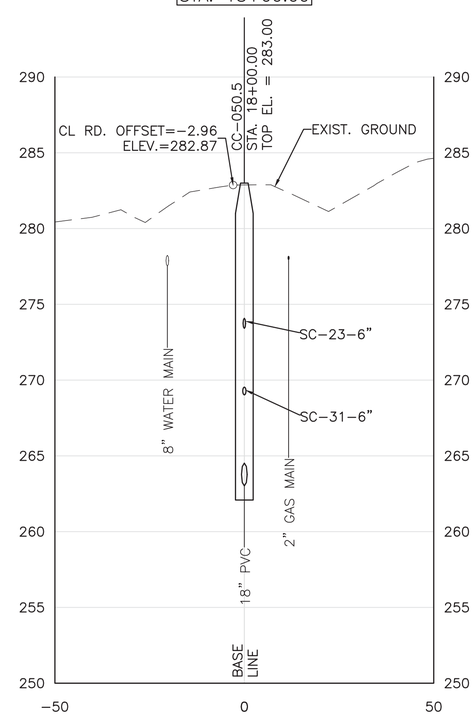

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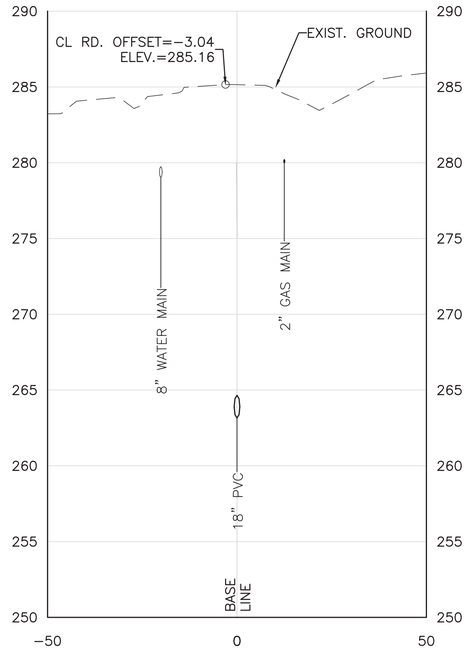

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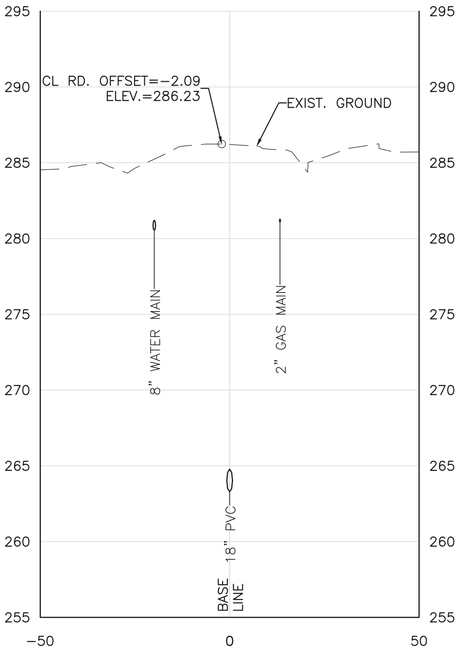

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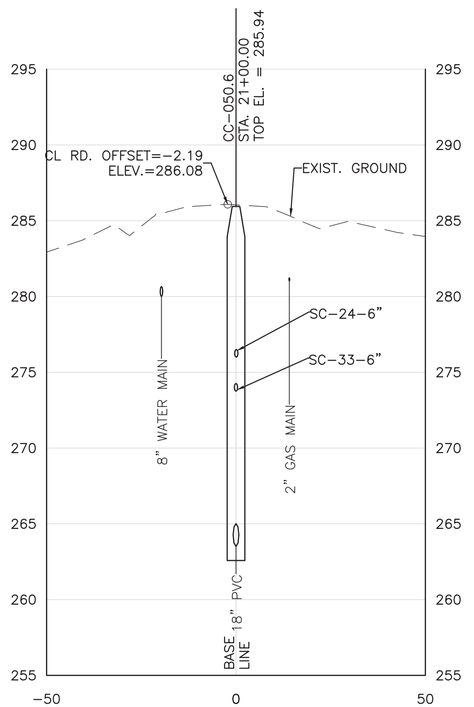

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6/8/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	C-703.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

CROSS SECTIONS
STA. 16+00
TO
STA. 21+22.65

DRAWING NO.
C-703

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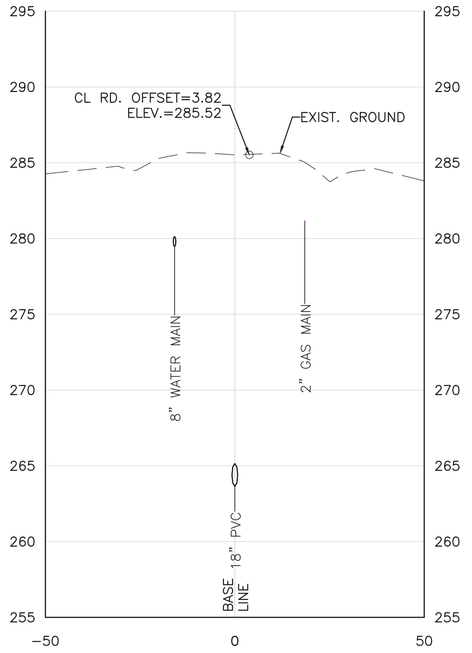

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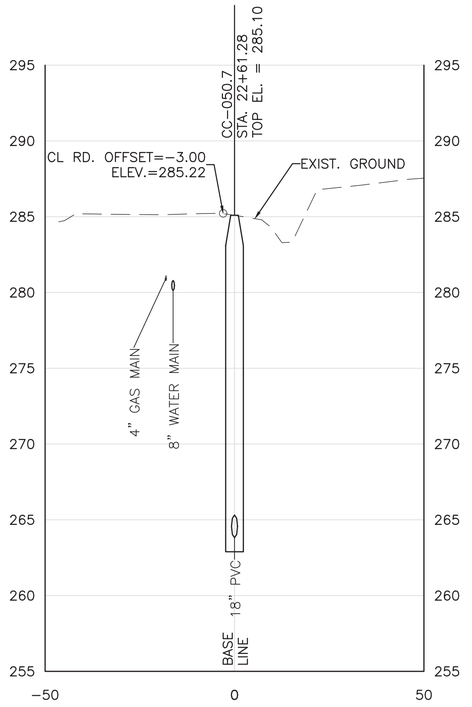

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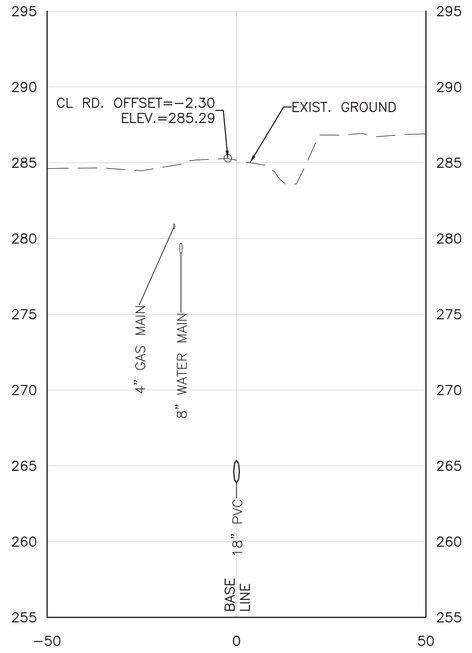

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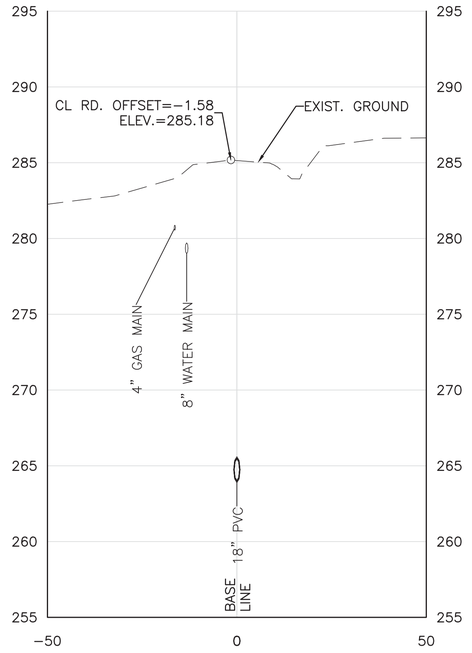

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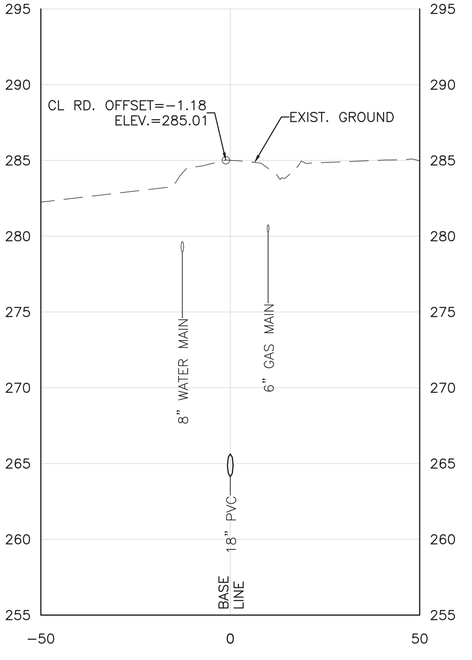

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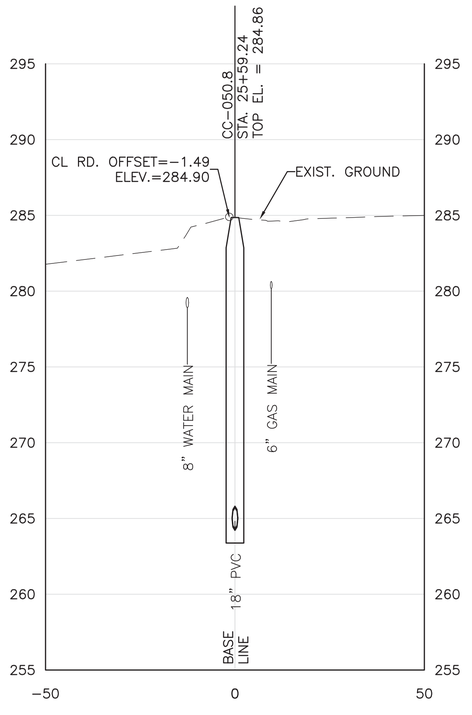

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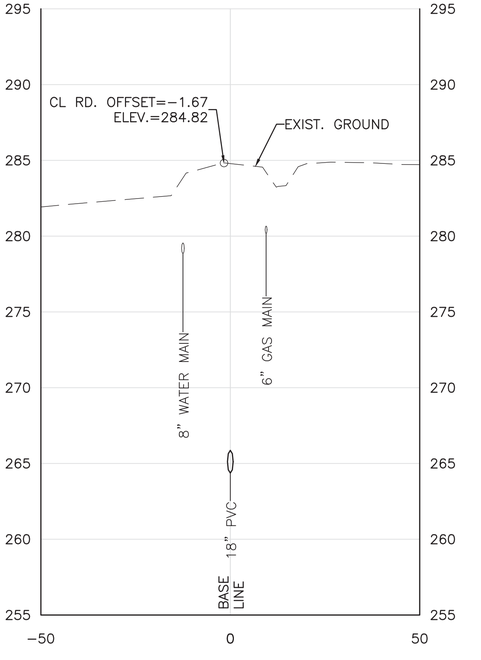

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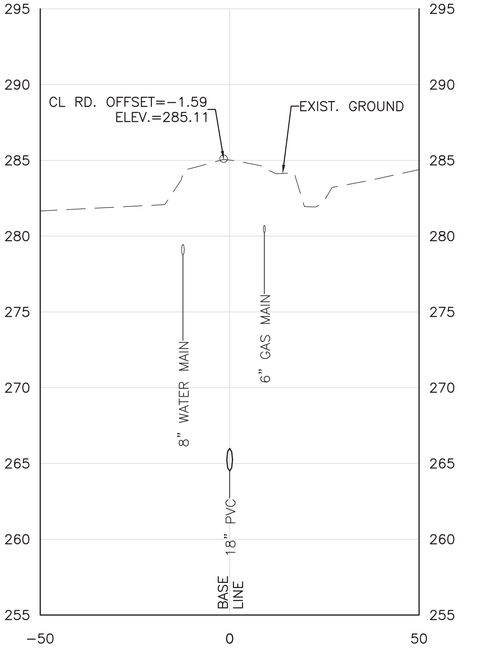

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202−00
CAD FILE:	C−704.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

CROSS SECTIONS
STA. 22+00
TO
STA. 27+00

DRAWING NO.
C−704

SHEET 40 OF 87

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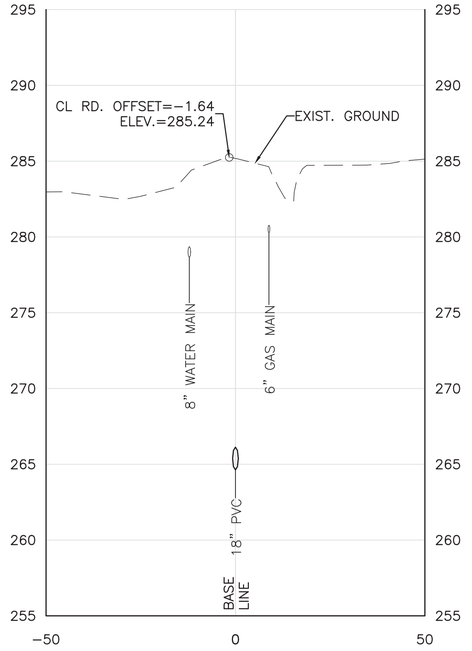

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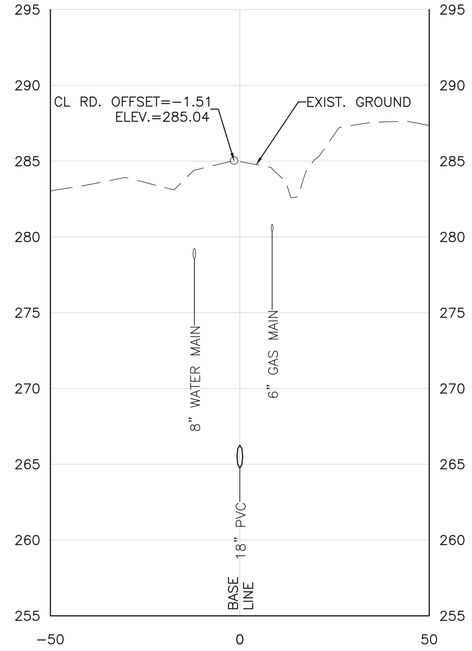

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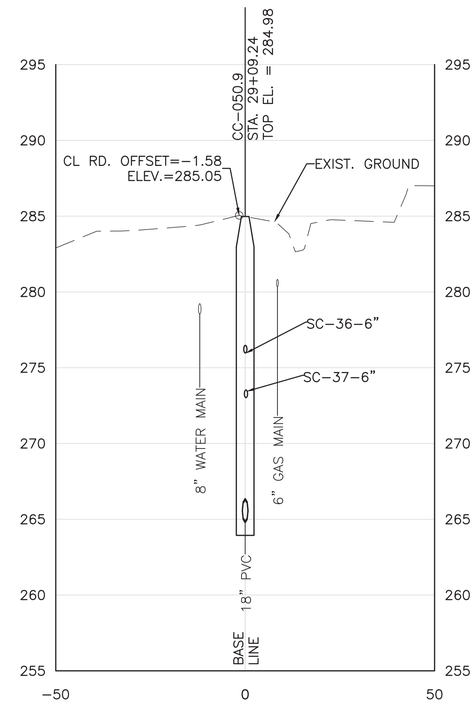

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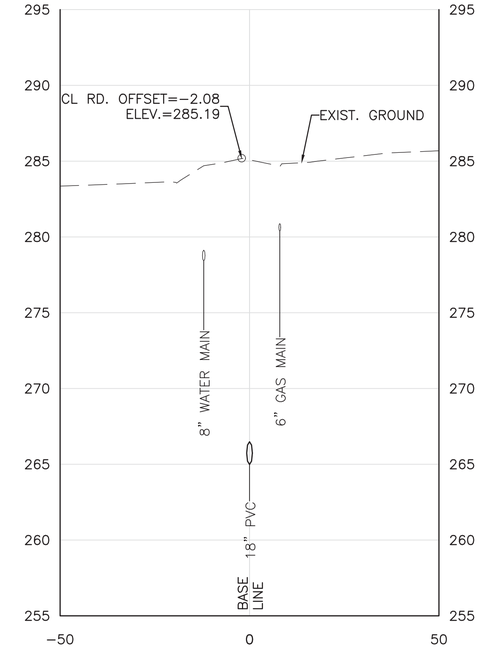

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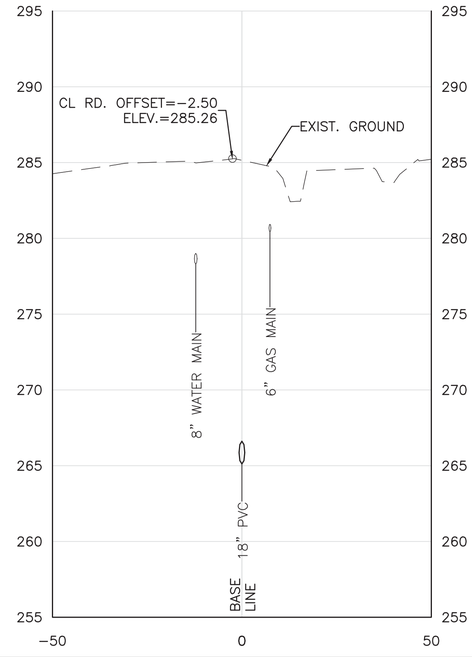

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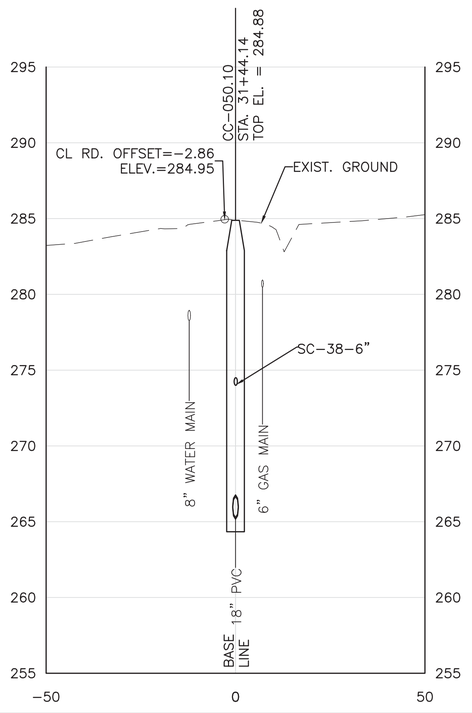

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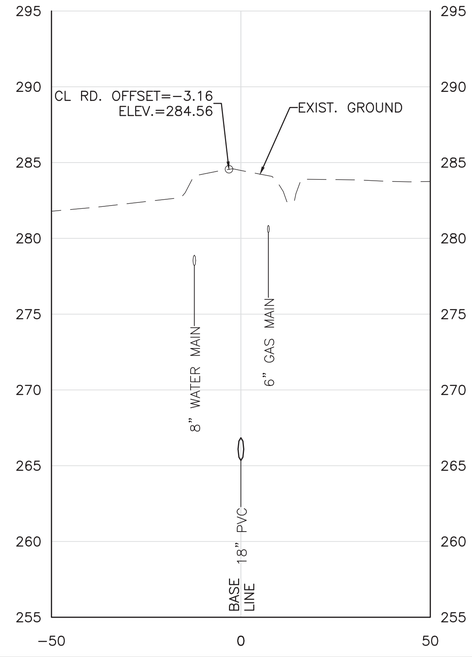
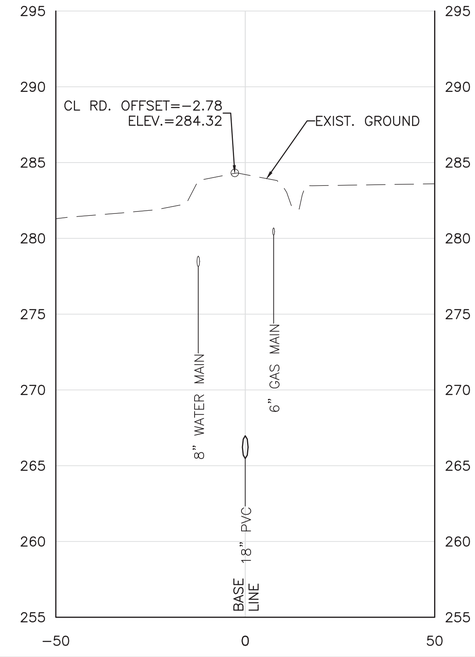


STA. 33+00.00



BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DAVID C. VESELY
REGISTERED ENGINEER
STATE OF FLORIDA
No. 57918
06/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

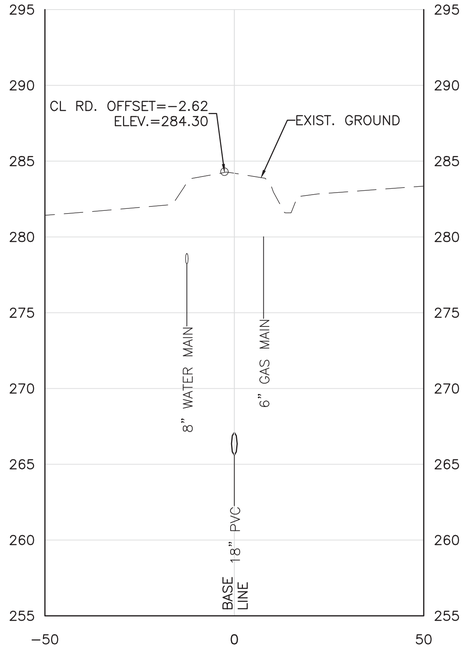
PROJECT NO.:	77202−00
CAD FILE:	C−705.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

CROSS SECTIONS
STA. 28+00
TO
STA. 33+00.00

DRAWING NO.
C−705

STA. 34+00.00



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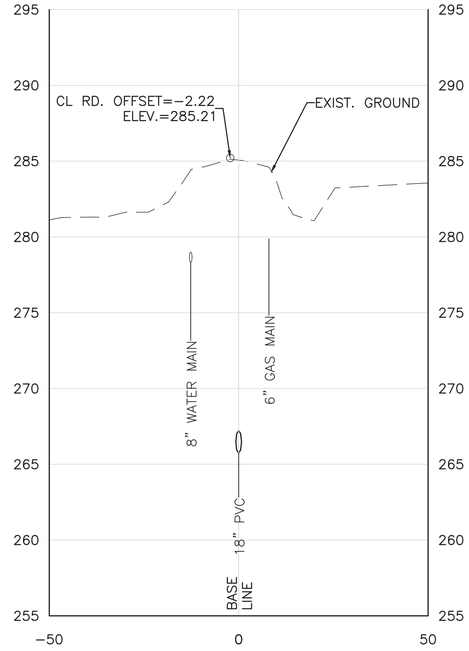

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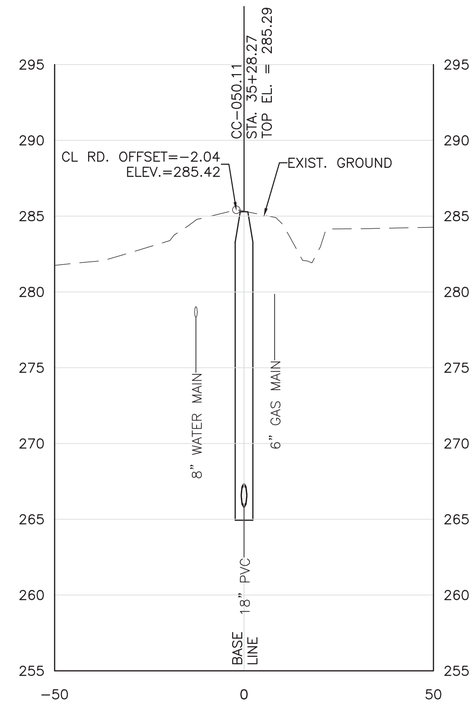

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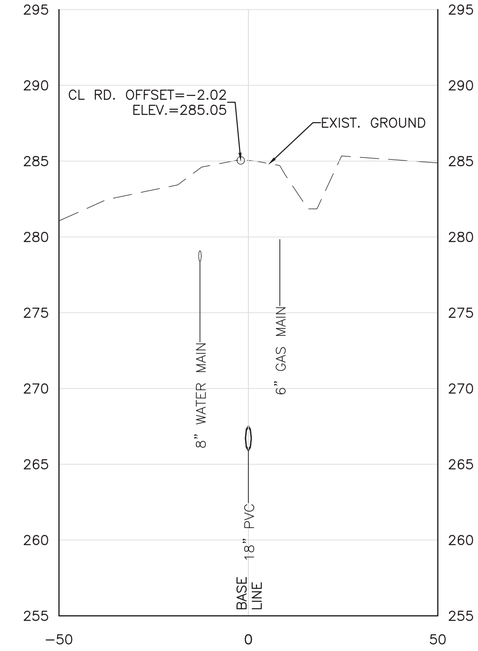

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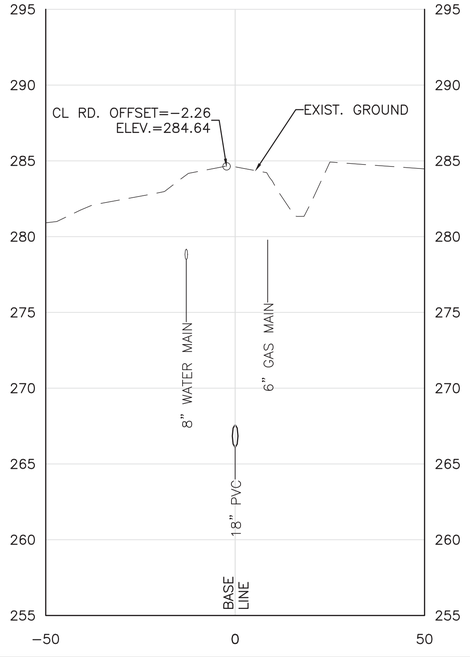

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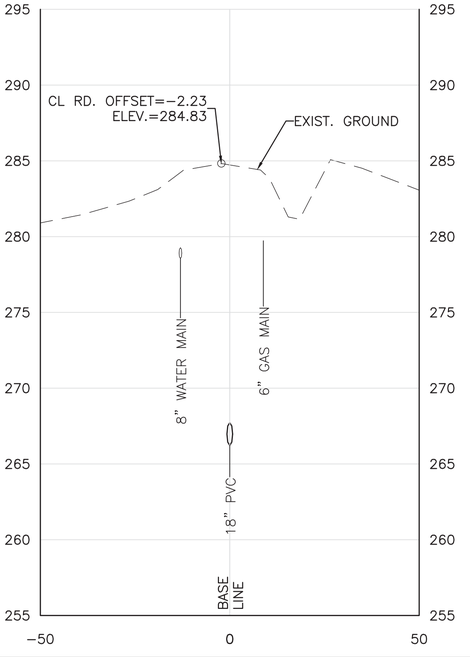

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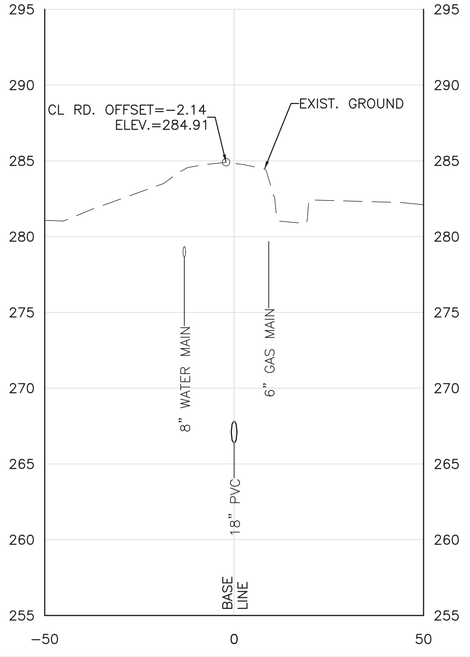

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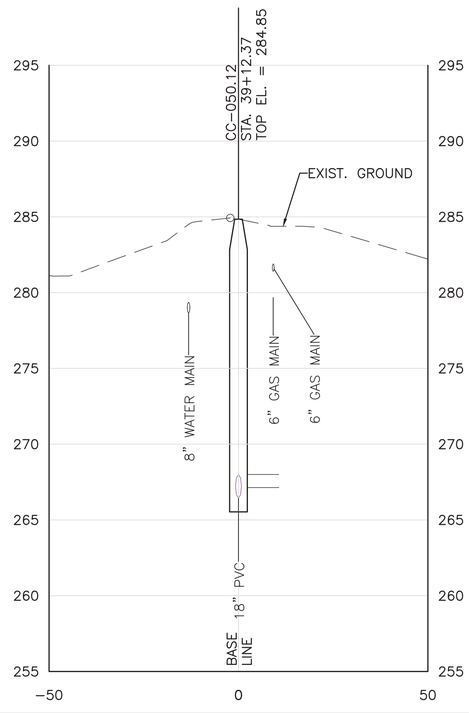

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANIEL C. VERDELL
REGISTERED ENGINEER
No. 100180
STATE OF TENNESSEE
05/18/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202−00
CAD FILE:	C−706.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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CROSS SECTIONS
STA. 34+00
TO
STA. 39+18.23

DRAWING NO.
C−706

SHEET 42 OF 87

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STREAMS, WETLANDS & BUFFER ZONES

(1) ANY WORK WITHIN THE STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS.

UTILITY INSTALLATION

(1) STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.
(2) SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
(3) UTILITY CROSSINGS IN ENVIRONMENTAL FEATURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH A APPLICABLE ENVIRONMENTAL PERMITS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. ENVIRONMENTAL PERMITS APPLY TO UTILITIES IN THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.
(4) IT IS THE RESPONSIBILITY OF THE UTILITY CONTRACTOR TO PROTECT EXPOSED EARTH FROM EROSION AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFFSITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFFSITE AND ENTERING WATERS OF THE STATE/U.S.
(5) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOILS OF EXCAVATED EARTH SHALL BE LOCATED WITHIN EPSC MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.
(6) IN REGARD TO EPSC, TDEC REGULATIONS APPLY TO THE UTILITY CONTRACTORS ON THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE CONTRACT.
(7) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORMWATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EPSC MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE CITY OF LAKELAND PROJECT RESPONSIBLE PARTY.
(8) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE CITY OF LAKELAND RIGHT-OF-WAY/EASEMENTS EPSC MEASURES SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.
(9) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE CITY OF LAKELAND RESPONSIBLE PARTY.

(10) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EPSC MEASURES TO REPLACE ONSITE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE CITY OF LAKELAND RESPONSIBLE PARTY BEFORE COMMENCING WORK.
(11) FOR UTILITY INSTALLATION THAT UTILIZE HORIZONTAL DIRECTIONAL DRILLING THE FOLLOWING SHALL APPLY:

1. THE ENTRY AND EXIT POINT SHALL BE AT LEAST 50 FEET FROM THE STREAM BANK OR WETLAND BOUNDARY.

2. THE DEPTH OF BORE BELOW THE STREAMBED IS SUFFICIENT TO PREVENT RELEASE OF DRILLING FLUID, BASED ON THE PARENT MATERIAL.

3. A SITE-SPECIFIC CONTINGENCY AND CONTAINMENT PLAN FOR INADVERT RELEASE OF DRILLING FLUID SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL BE SUBMITTED TO THE CITY OF LAKELAND FOR REVIEW AND APPROVAL.

RAILROAD ENVIRONMENTAL

(1) THE CONTRACTOR SHALL MAINTAIN A COMPLETE AND COMPREHENSIVE EPSC PLAN AND SWPPP TO PREVENT CONSTRUCTION SEDIMENT OR DEBRIS AND ANY PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, PAINTS OR COATINGS ETC. FROM ENTERING ONTO THE RAILROAD'S RIGHT-OF-WAY AND/OR FROM ENTERING THE DRAINAGE DITCHES OR DRAINAGE STRUCTURES OF THE RAILROAD, AND ANY SEDIMENT OR DEBRIS OR PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, ETC. THAT DO ENTER SUCH DRAINAGE AREAS OF THE RAILROAD'S RIGHT-OF-WAY ARE TO BE REMOVED IN ACCORDANCE WITH RULES SET FORTH BY CSX RAILROAD AND AT THE CONTRACTOR'S EXPENSE.

ENVIRONMENTAL

(1) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

SEQUENCE OF CONSTRUCTION (GENERAL)

(1) INSTALL CONSTRUCTION EXITS PER TDOT STANDARD DETAIL. ALL CONSTRUCTION VEHICLES AND EQUIPMENT SHALL UTILIZE THE CONSTRUCTION EXIT WHEN ENTERING AND EXITING THE SITE. INSTALL PERIMETER EROSION PREVENTION & SEDIMENT CONTROL (EPSC) BEST MANAGEMENT PRACTICES (BMPS) PRIOR TO CONSTRUCTION AS WORK PROCEEDS FROM DOWNSLOPE TO UPSLOPE.
(2) FIELD MARK LIMITS OF DISTURBANCE INCLUDING ALL WATERS OF THE STATE AND/OR UNITED STATES, INCLUDING, BUT NOT LIMITED TO, STREAM BUFFERS, WETLAND AND BOUNDARIES, SPRINGS, SEEPS, WETLANDS, AND FLOODWAYS, PROVIDE TEMPORARY FENCING AROUND WETLANDS THAT ARE NOT TO BE DISTURBED.
(3) LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
(4) WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
(5) CLEAR AND GRUB ONLY THOSE TREES NECESSARY FOR THE PIPELINE CONSTRUCTION.
(6) STRIP AND STOCKPILE TOPSOIL FROM THE ENTIRE WIDTH OF WORKING AREA, STOCKPILE TOPSOIL ALONG THE UPSLOPE SIDE OF THE EASEMENT, TOPSOIL STOCKPILE TO BE COVERED WITH VISQUEEN FOIL OR SEEDED AND MULCHED IMMEDIATELY.
(7) ALL EXCAVATION FOR UTILITY LINE INSTALLATION SHALL BE LIMITED TO THE AMOUNT THAT CAN BE EXCAVATED, INSTALLED, BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, ALL EXCAVATED MATERIAL SHALL BE DEPOSITED ON THE UPSLOPE SIDE OF THE TRENCH. ALL OPEN TRENCHES UP TO THREE (3) FEET IN DEPTH SHALL BE FENCED AND BARRICADED DURING NON-WORKING HOURS. TRENCHES IN EXCESS OF THREE (3) FEET DEPTH SHALL BE PLATED DURING NON-WORKING HOURS.
(8) WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
(9) ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED. TOPSOIL SHALL BE USED. COMPACTED EARTH SHALL BE TILLED.
(10) RESTORE GRADING TO THE ORIGINAL CONTOUR OF THE LAND.
(11) UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE WILL EXCEED 7 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
(12) AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOIL - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
(13) TOPSPOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOIL SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
(14) AN EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER OR AS NOTED ON THE PLANS. THE USE OF MONOFILAMENT TYPE EROSION CONTROL BLANKET IS PROHIBITED.
(15) PERMANENT STABILIZATION IS DEFINED AS "A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS TO RESIST SLIDING AND OTHER MOVEMENTS". FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES, PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE.
(16) UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS. THE CONTRACTOR SHALL CONTACT THE CITY OF LAKELAND ENGINEERING OFFICE FOR AN INSPECTION PRIOR TO THE REMOVAL/CONVERSION OF THE EPSC BMPS.

SEQUENCE OF CONSTRUCTION (WETLAND CROSSING)

(1) FIELD MARK BOUNDARY OF WETLAND OR LIMITS NOT TO BE DISTURBED WITH HIGH VISIBILITY CONSTRUCTION FENCE,
(2) INSTALL PERIMETER EPSC BMPS AS SHOWN ON PLANS. (STAGE1)
(3) USE TIMBER MATS FOR WETLAND CROSSINGS.
(4) EXCAVATE THE TOP 12" OF WETLAND SOIL AND STOCKPILE SEPARATELY.USING STAGE 2 BMPS.
(5) TRENCH FOR THE SANITARY SEWER AND INSTALL PIPE, BACKFILL TRENCH.
(6) REINSTALL WETLAND SOILS TO THE PRE-CONSTRUCTION WETLAND GRADE.
(7) SEED (BUT DO NOT LIME OR MULCH) DISTURBED WETLAND USING CITY OF LAKELAND TYPE A WETLAND SEED MIX.
(8) RESTORE REMAINING AREAS.

SEQUENCE OF CONSTRUCTION (STREAM CROSSING)

WITH SUSPENDED PIPE

(1) INSTALL PERIMETER EPSC BMPS AS SHOWN ON PLANS. (STAGE1)
(2) PERFORM CLEARING ADJACENT TO THE STREAM CROSSING. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE KEPT AT THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS.
(3) EXCAVATE THE TOPSOIL AND STOCKPILE SEPARATELY.
(4) INSTALL SUSPENDED PIPE DIVERSION & OTHER STAGE 2 EPSC BMPS
(5) TRENCH FOR THE SANITARY SEWER AND INSTALL PIPE, BACKFILL TRENCH.
(6) REMOVE SUSPENDED PIPE DIVERSION.
(7) REINSTALL TOP SOIL AND RESTORE STREAM AND BANKS TO ORIGINAL GRADE. SOD AND OVERSEED DISTURBED STREAM INCLUDING BANKS. BERMUDA SOD SHOULD BE PLACED PARALLEL TO DIRECTION OF FLOW & SECURED IN PLACE WITH STAPLES. OVERSEED USING CITY OF LAKELAND TYPE A NATIVE SEED MIXTURE. AT BASE OF STREAM BANKS, CITY OF LAKELAND TYPE A WETLAND SEED MIX MAY BE SUBSTITUTED.

WITH INSTREAM DIVERSION

(1) INSTALL PERIMETER EPSC BMPS AS SHOWN ON PLANS. (STAGE1)
(2) PERFORM CLEARING ADJACENT TO THE STREAM CROSSING. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE KEPT AT THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS.
(3) EXCAVATE THE TOPSOIL AND STOCKPILE SEPARATELY.
(4) INSTALL INSTREAM DIVERSION TO DIVERT FLOW TO ONE SIDE OF EXISTING CHANNEL.
(5) TRENCH FOR THE SANITARY SEWER AND INSTALL PIPE, BACKFILL TRENCH.
(6) STABILIZE STREAM AND BANKS WHERE WORK HAS BEEN COMPLETED.
(7) REINSTALL TOP SOIL AND RESTORE STREAM AND BANKS TO ORIGINAL GRADE. SOD AND OVERSEED DISTURBED STREAM INCLUDING BANKS. BERMUDA SOD SHOULD BE PLACED PARALLEL TO DIRECTION OF FLOW & SECURED IN PLACE WITH STAPLES. OVERSEED USING CITY OF LAKELAND TYPE A NATIVE SEED MIXTURE. AT BASE OF STREAM BANKS, CITY OF LAKELAND TYPE A WETLAND SEED MIX MAYBE SUBSTITUTED.
(8) ALTER INSTREAM DIVERSION TO DIVERT FLOW TO THE OTHER SIDE OF THE EXISTING CHANNEL.
(9) TRENCH FOR THE SANITARY SEWER AND INSTALL PIPE, BACKFILL TRENCH.
(10) STABILIZE STREAM AND BANKS WHERE WORK HAS BEEN COMPLETED.
(11) REINSTALL TOP SOIL AND RESTORE STREAM AND BANKS TO ORIGINAL GRADE. SOD AND OVERSEED DISTURBED STREAM INCLUDING BANKS. BERMUDA SOD SHOULD BE PLACED PARALLEL TO DIRECTION OF FLOW & SECURED IN PLACE WITH STAPLES. OVERSEED USING CITY OF LAKELAND TYPE A NATIVE SEED MIXTURE. AT BASE OF STREAM BANKS, CITY OF LAKELAND TYPE A WETLAND SEED MIX MAYBE SUBSTITUTED.
(12) RESTORE REMAINING AREAS IMMEDIATELY.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
✱ SF ✱ SF ✱ SF ✱	SILT FENCE	EC–STR–3B
✱ SFB✱ SFB✱ SFB✱	SILT FENCE WITH WIRE BACKING	EC–STR–3C
✱ HVF ✱ HVF	HIGH VISIBILITY CONSTRUCTION FENCE	
✱✱ TUBE ✱✱ TUBE ✱✱	SEDIMENT TUBE	EC–STR–37
✱✱ SOCK✱✱ SOCK ✱✱	FILTERSOCK	EC–STR–8
	SAND BAG BERM	EC–STR–33
	SUSPENDED PIPE DIVERSION	EC–STR–33 EC–STR–33A
TCE	TEMPORARY CONSTRUCTION EXIT	EC–STR–25
	ENHANCED ROCK CHECK DAM	EC–STR–6A
SFB✱ SFB✱ SFB✱ SFB✱	SEDIMENT FILTER BAG	EC–STR–2
TCC	TEMPORARY CULVERT CROSSING	EC–STR–25
	EROSION CONTROL BLANKET	EC–STR–34
IN DIV	INSTREAM DIVERSION	EC–STR–30
D	CATCH BASIN PROTECTION (TYPE D)	EC–STR–19
	DEWATERING STRUCTURE	EC–STR–1
	WETLAND STOCKPILE	
	WETLAND TEMPORARY IMPACT	
	WETLAND NOT TO BE DISTURBED	
#	OUTFALL	
	DURA WATTLE, EROSION EELS OR EQUAL	

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

STATE OF TENNESSEE — JAMES C. VESELY — REGISTERED ENGINEER — 120777 — 07/18/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.: 77202–00
CAD FILE: EPSC–001.DWG
ENGR./ARCH.: DV
DESIGN BY: DV
DRAWN BY: DB
CHECKED BY: DV
DATE: 03/02/2021

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) NOTES

DRAWING NO.
EPSC–001

SHEET 43 OF 87

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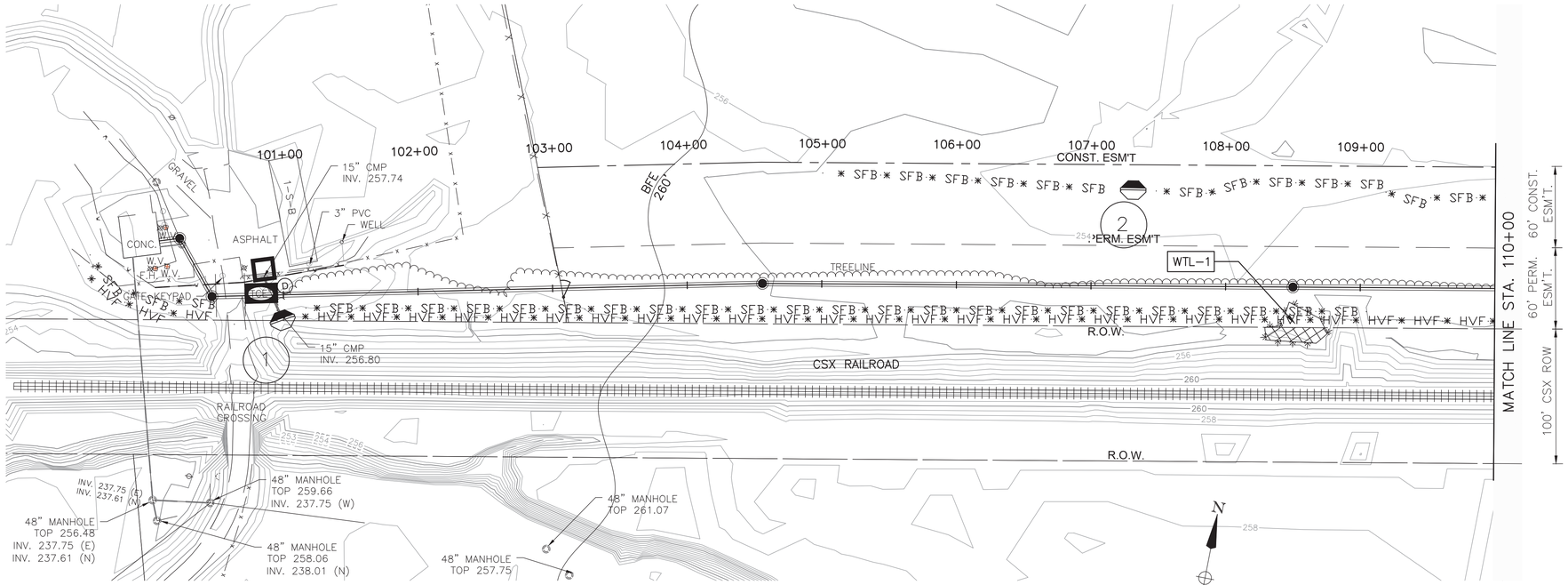
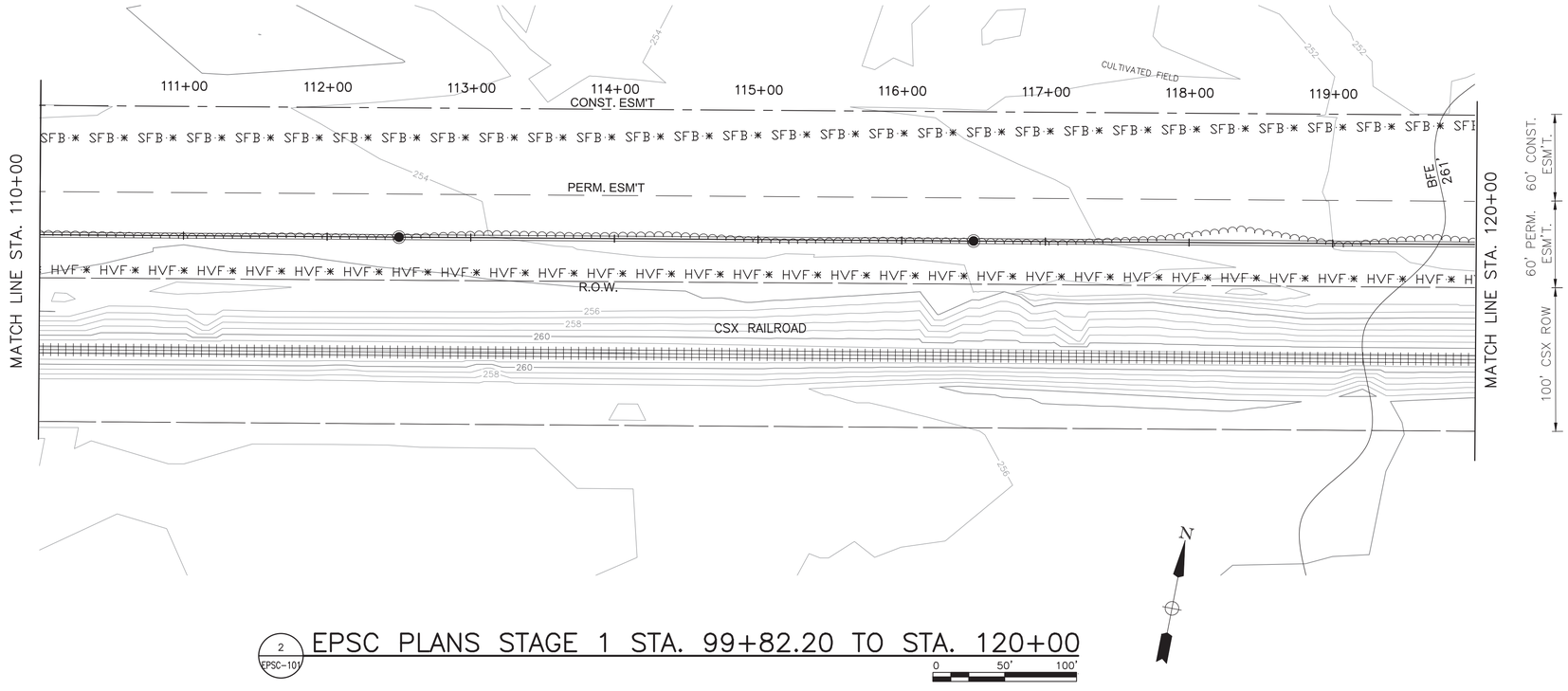
SEE DWG. C-101



1 EPSC-101 EPSC PLANS STAGE 1 STA. 99+82.20 TO STA. 120+00

SEE DWG. C-102



2 EPSC-101 EPSC PLANS STAGE 1 STA. 99+82.20 TO STA. 120+00

0 50' 100'

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
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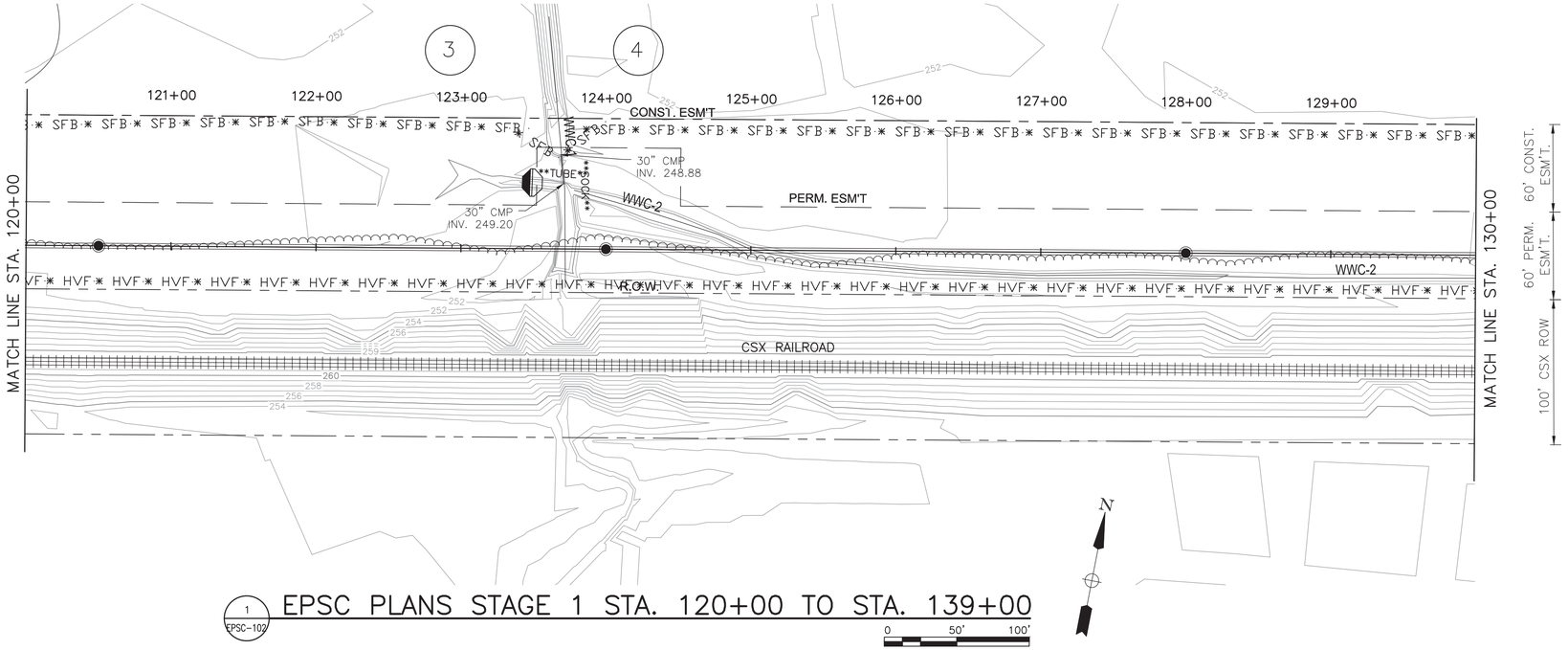
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 99+82.20
TO
STA. 120+00

DRAWING NO.
EPSC-101

SHEET 44 OF 87

SEE DWG. C-103

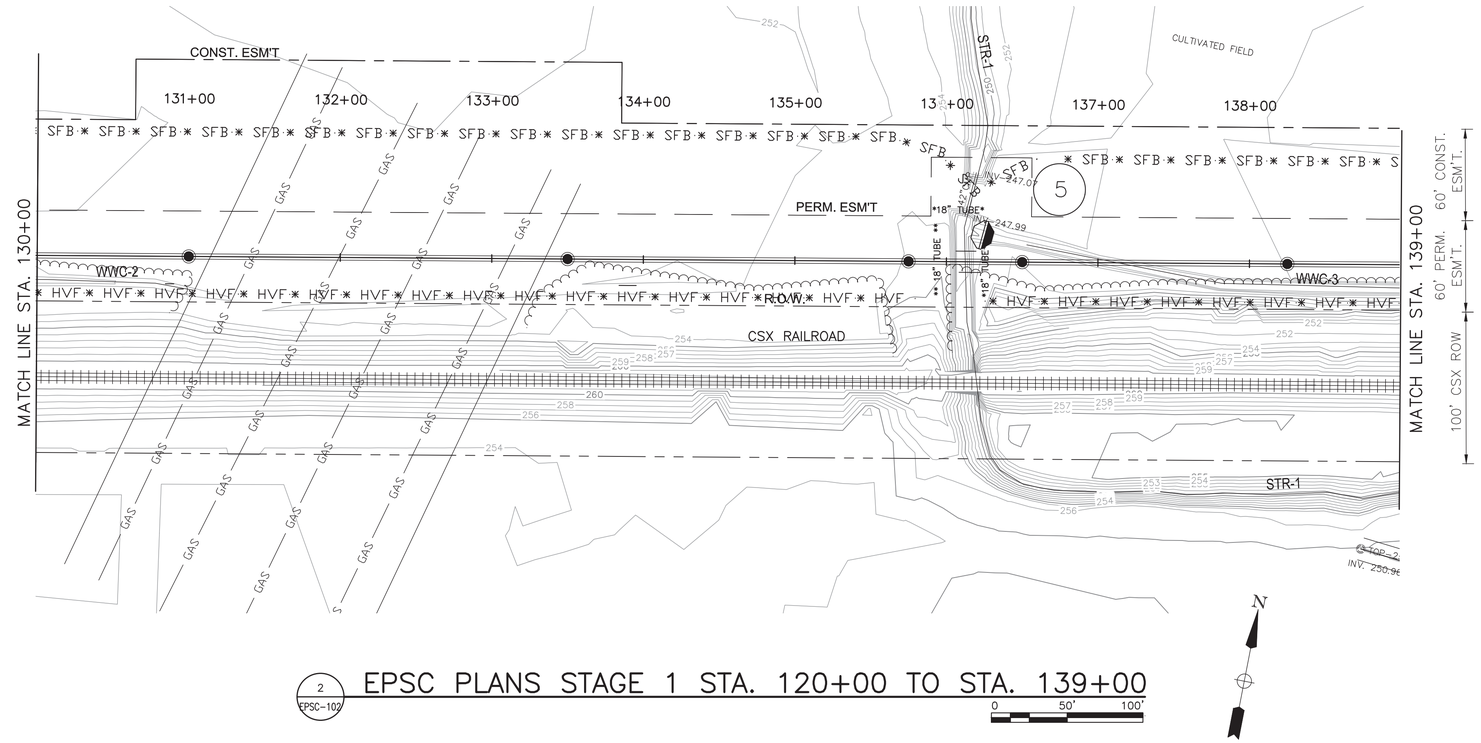


1 EPSC-102

EPSC PLANS STAGE 1 STA. 120+00 TO STA. 139+00

0 50' 100'

SEE DWG. C-104



2 EPSC-102

EPSC PLANS STAGE 1 STA. 120+00 TO STA. 139+00

0 50' 100'

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS
2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-102.DWG
ENGR./ARCH.:	DV
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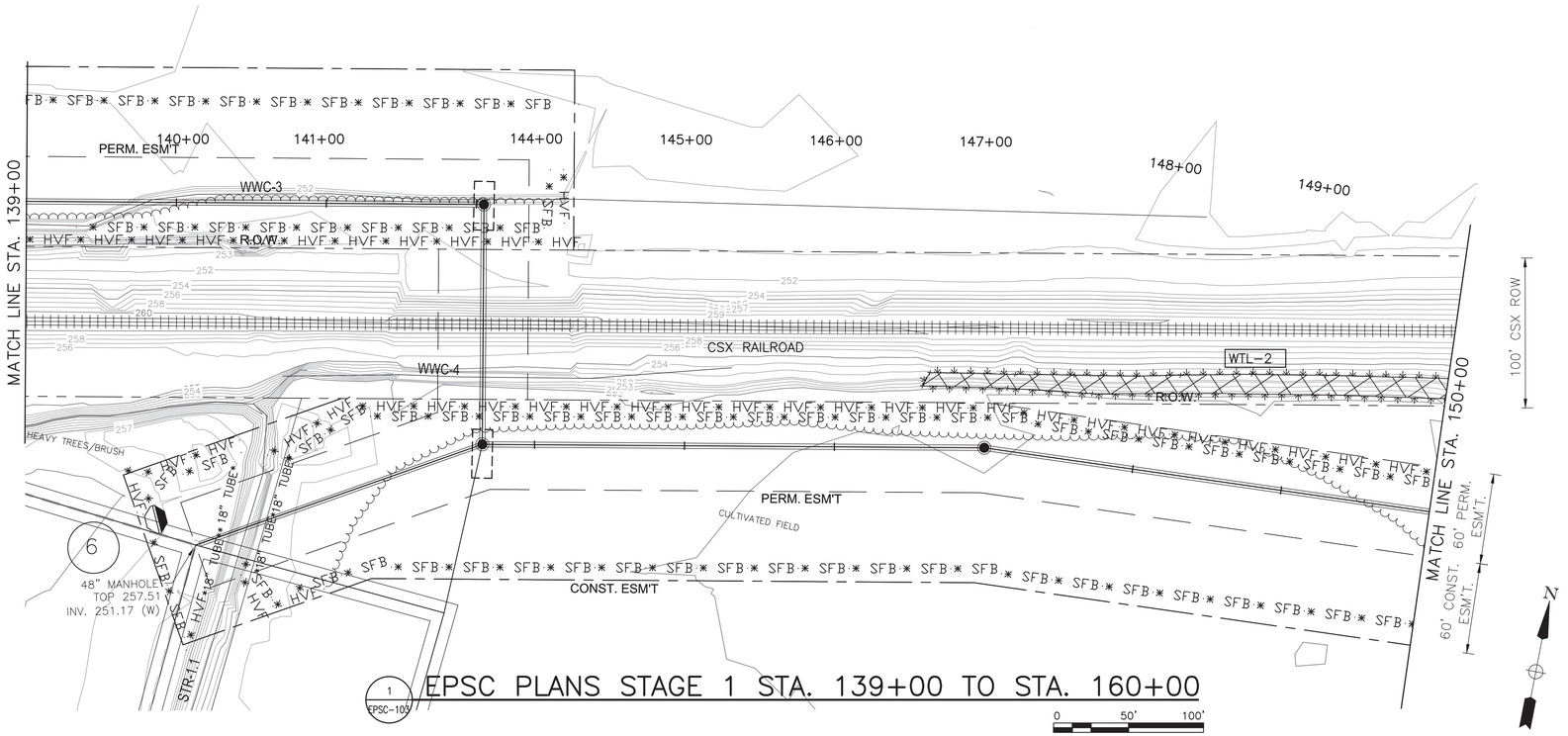
EPSC PLAN
STAGE 1
STA. 120+00
TO
STA. 139+00

DRAWING NO.
EPSC-102

SHEET 45 OF 87

SEE DWG. C-105

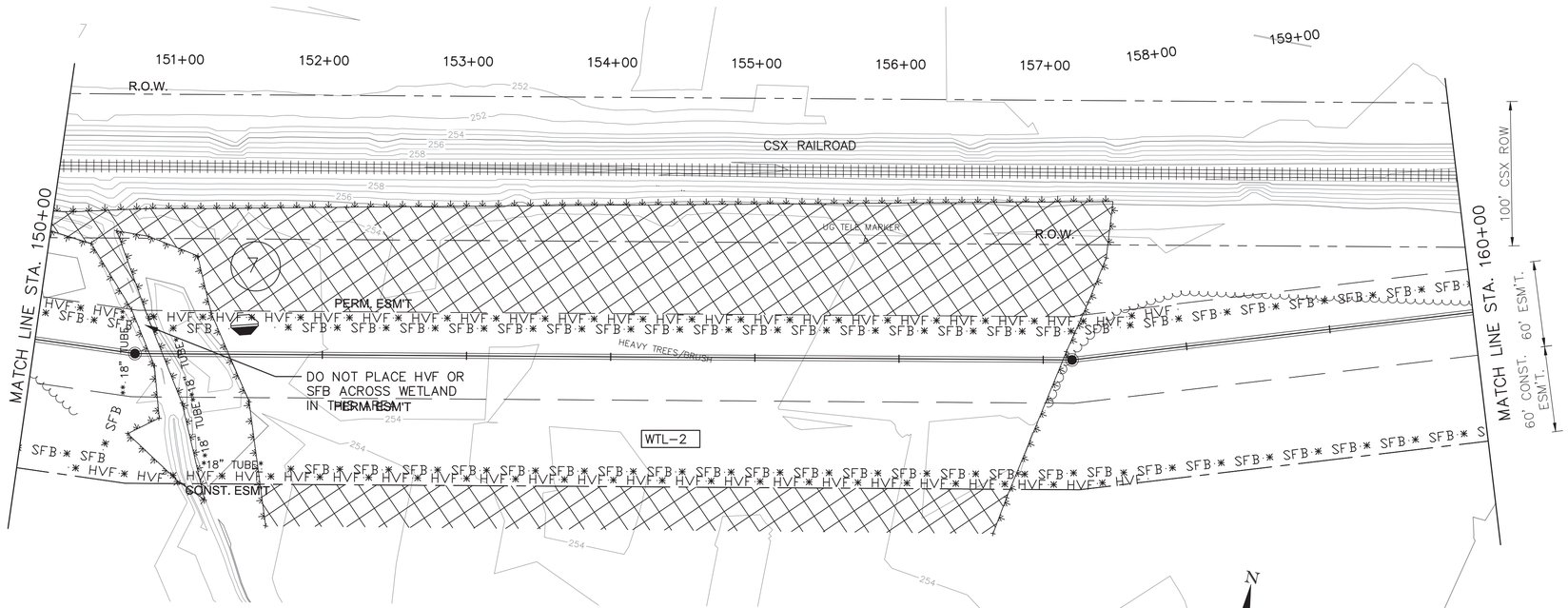


1 EPSC-105

EPSC PLANS STAGE 1 STA. 139+00 TO STA. 160+00

0 50' 100'

SEE DWG. C-106



2 EPSC-103

EPSC PLANS STAGE 1 STA. 139+00 TO STA. 160+00

0 50' 100'

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-103.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 139+00
TO
STA. 160+00

DRAWING NO.
EPSC-103

SHEET 46 OF 87

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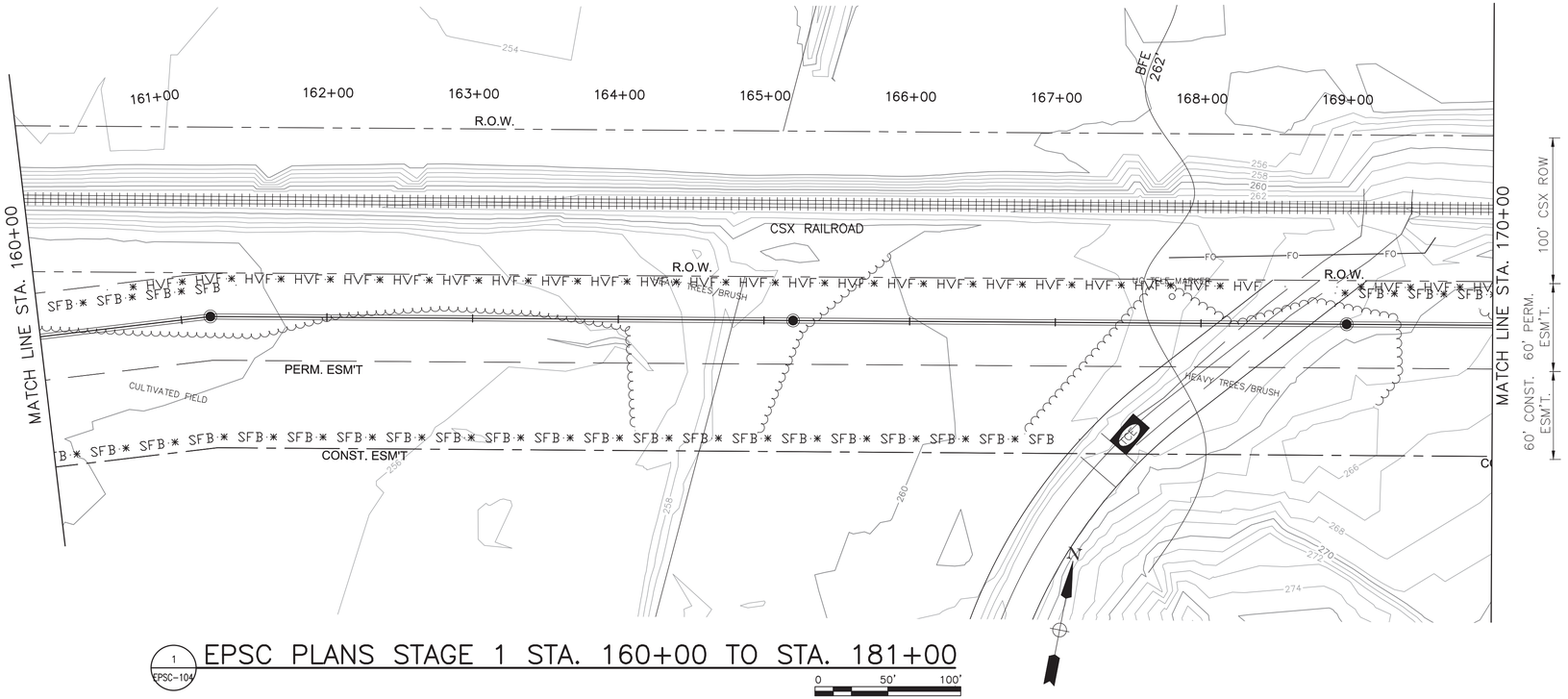
SEE DWG. C-107

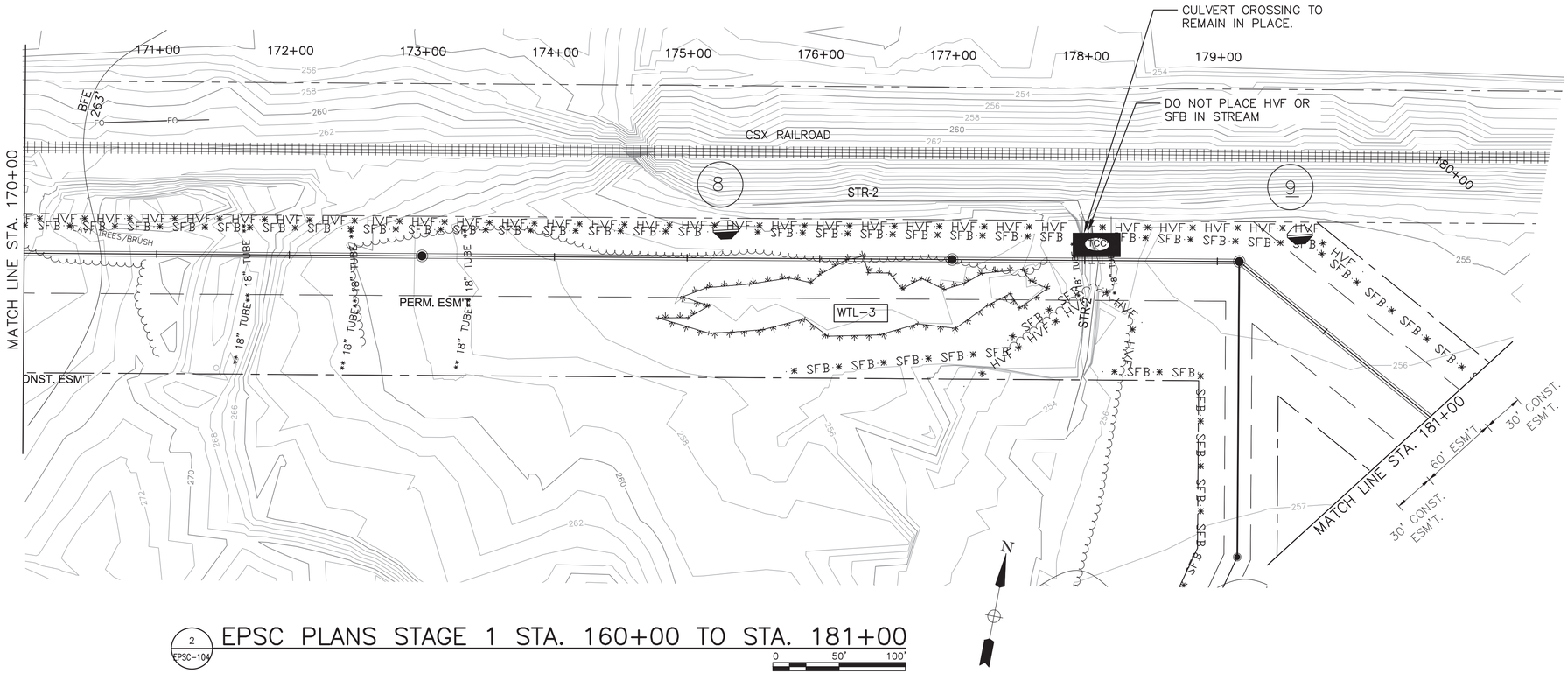


1 EPSC-104

EPSC PLANS STAGE 1 STA. 160+00 TO STA. 181+00

0 50' 100'

SEE DWG. C-108



2 EPSC-104

EPSC PLANS STAGE 1 STA. 160+00 TO STA. 181+00

0 50' 100'

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DANE C. VESELY — REGISTERED ENGINEER — STATE OF FLORIDA — 66911 — 7/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

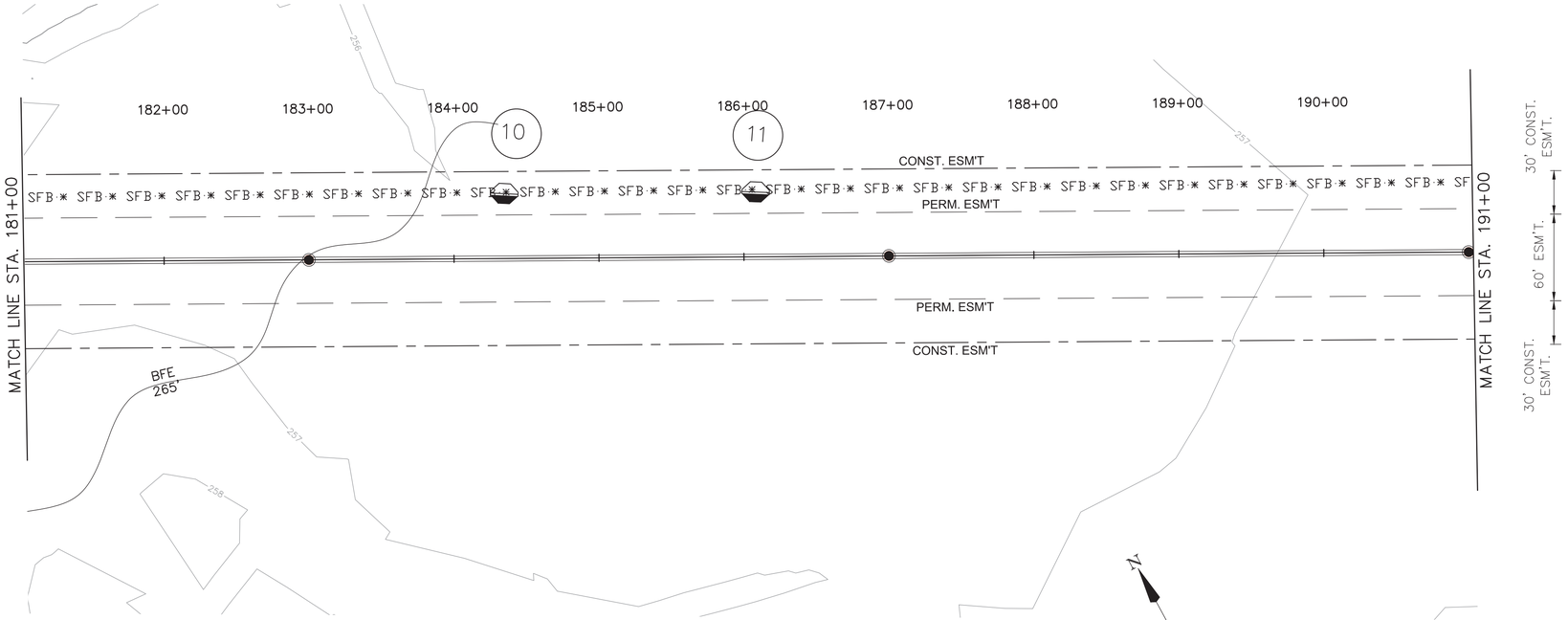
PROJECT NO.:	77202-00
CAD FILE:	EPSC-104.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 160+00
TO
STA. 181+00

DRAWING NO.
EPSC-104

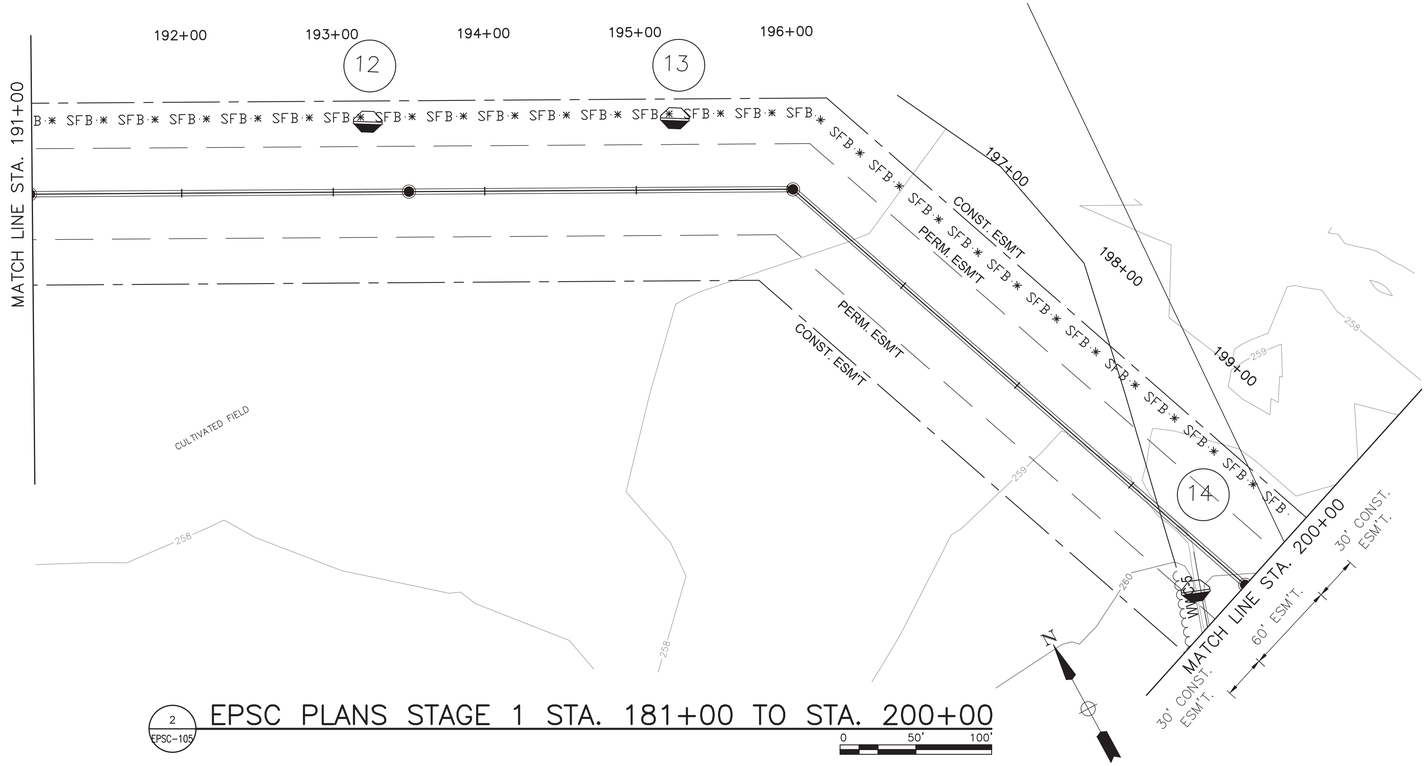
SEE DWG. C-109



1 EPSC-105 EPSC PLANS STAGE 1 STA. 181+00 TO STA. 200+00

0 50' 100'

SEE DWG. C-110



2 EPSC-105 EPSC PLANS STAGE 1 STA. 181+00 TO STA. 200+00

0 50' 100'

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

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DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 181+00
TO
STA. 200+00

DRAWING NO.
EPSC-105

SHEET 48 OF 87

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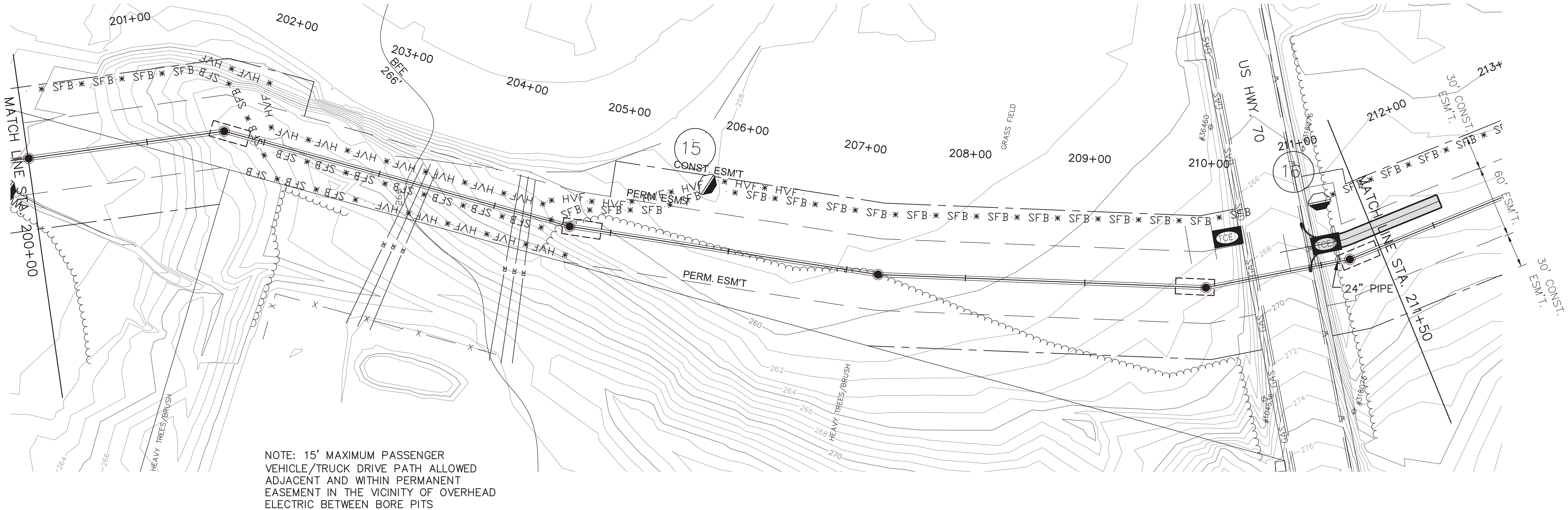
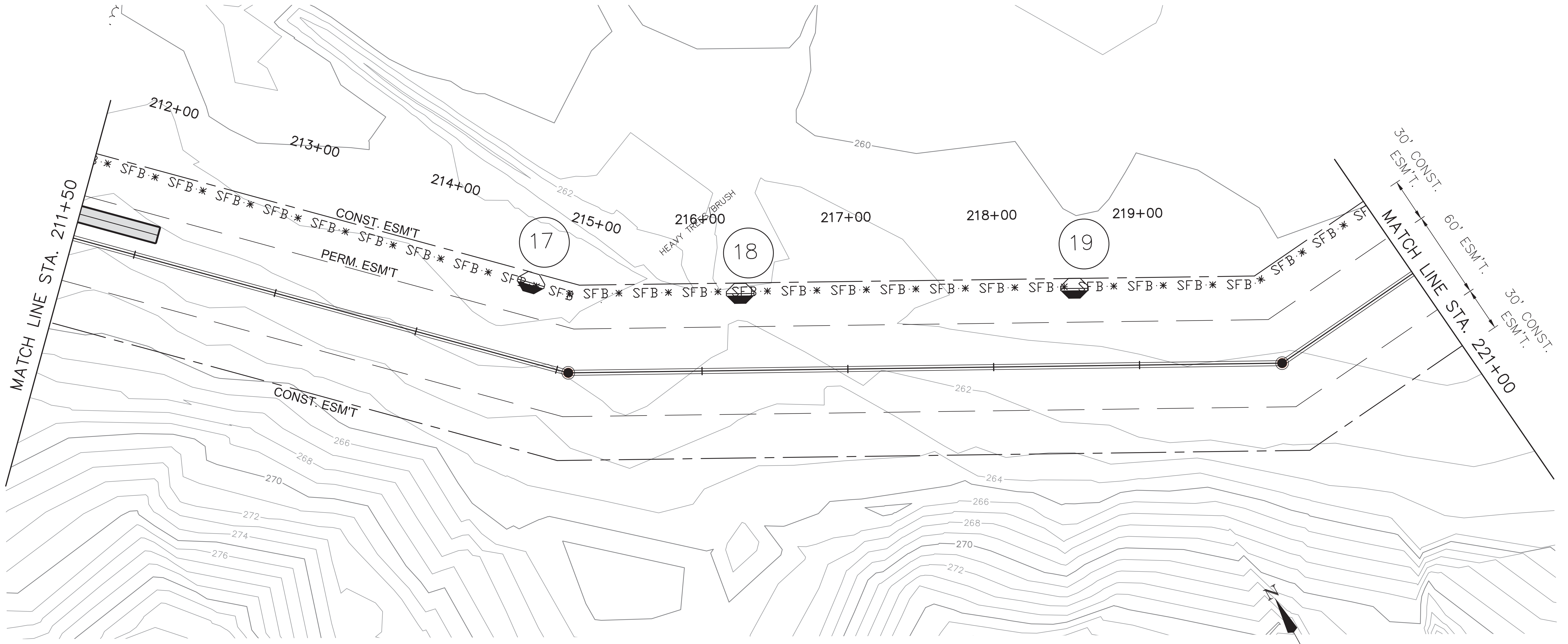
SEE DWG. C-111



NOTE: 15' MAXIMUM PASSENGER VEHICLE/TRUCK DRIVE PATH ALLOWED ADJACENT AND WITHIN PERMANENT EASEMENT IN THE VICINITY OF OVERHEAD ELECTRIC BETWEEN BORE PITS

① EPSC-106 EPSC PLANS STAGE 1 STA. 200+00 TO STA. 221+00

SEE DWG. C-112



② EPSC-106 EPSC PLANS STAGE 1 STA. 200+00 TO STA. 221+00

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

DIANE C. VESELY
07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
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DRAWN BY:	DB
CHECKED BY:	DV
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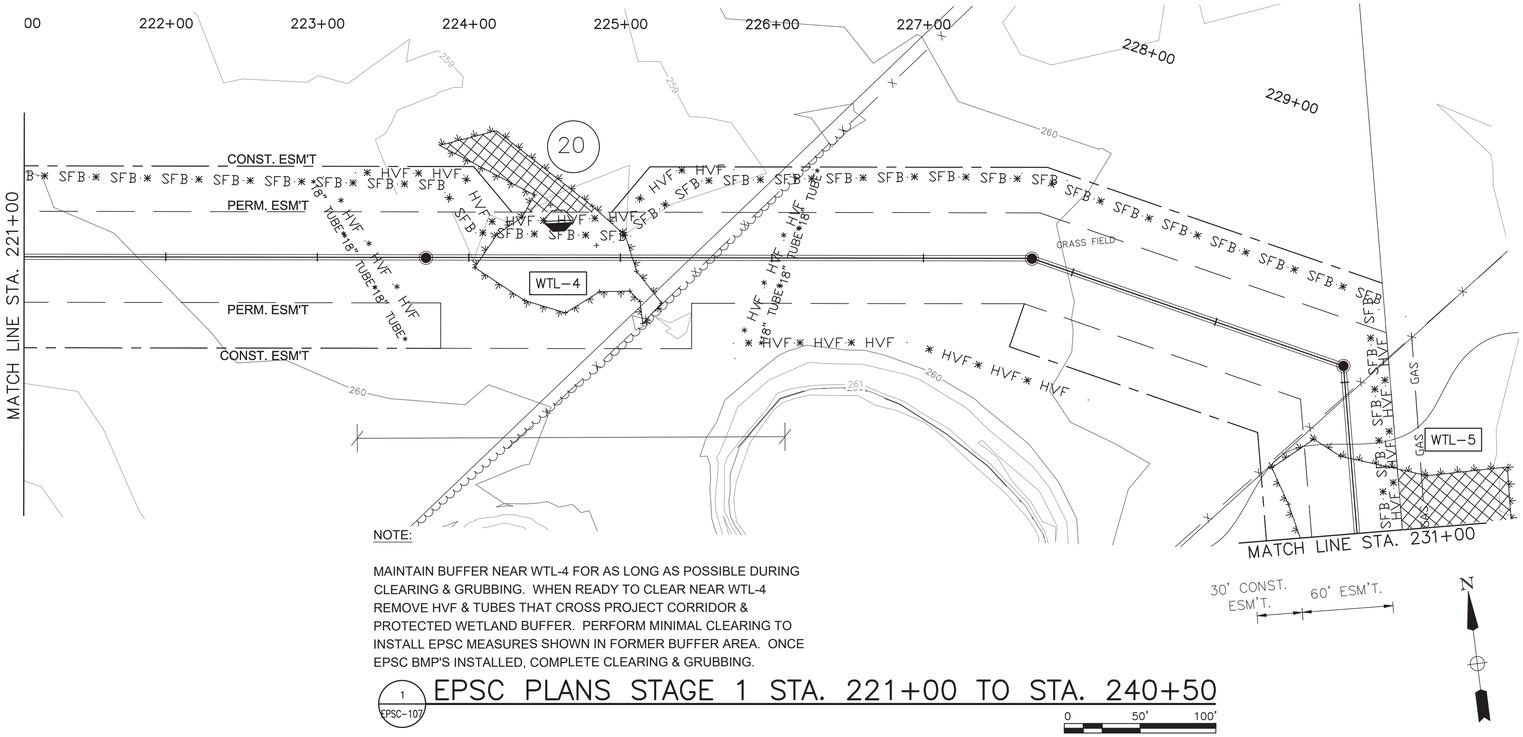
EPSC PLAN
STAGE 1
STA. 200+00
TO
STA. 221+00

DRAWING NO.
EPSC-106

SEE DWG. C-113



NOTE:

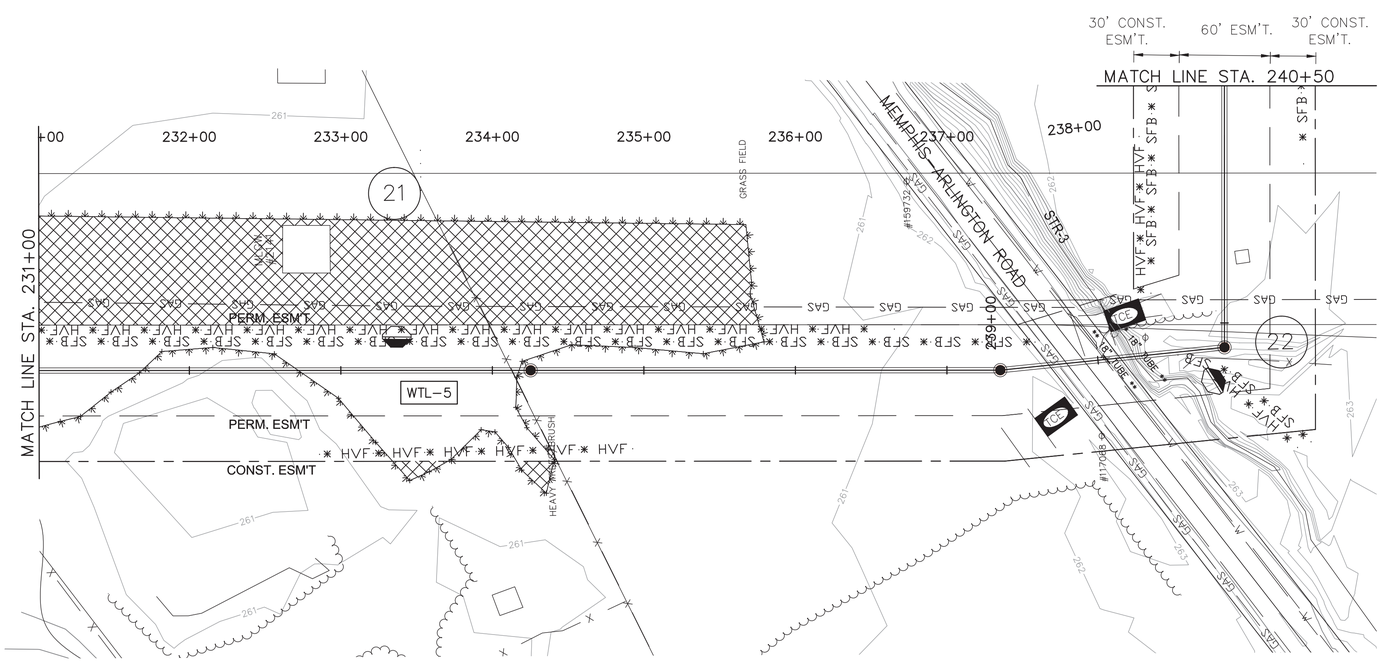
MAINTAIN BUFFER NEAR WTL-4 FOR AS LONG AS POSSIBLE DURING CLEARING & GRUBBING. WHEN READY TO CLEAR NEAR WTL-4 REMOVE HVF & TUBES THAT CROSS PROJECT CORRIDOR & PROTECTED WETLAND BUFFER. PERFORM MINIMAL CLEARING TO INSTALL EPSC MEASURES SHOWN IN FORMER BUFFER AREA. ONCE EPSC BMP'S INSTALLED, COMPLETE CLEARING & GRUBBING.

1 EPSC-107

EPSC PLANS STAGE 1 STA. 221+00 TO STA. 240+50

0 50' 100'

SEE DWG. C-114



2 EPSC-107

EPSC PLANS STAGE 1 STA. 221+00 TO STA. 240+50

0 50' 100'

NOTE: TCE OVER GAS LINE:
NO REPETITIVE HEAVY EQUIPMENT TRAFFIC WILL BE ALLOWED OVER THE EXISTING GAS MAN. TRAFFIC SHALL BE CHANNELED TO ONE LOCATION AND PIPELINE PROTECTED WITH OAK MATTING.

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

7/18/22

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-107.DWG
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DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 221+00
TO
STA. 240+50

DRAWING NO.
EPSC-107

SHEET 50 OF 87

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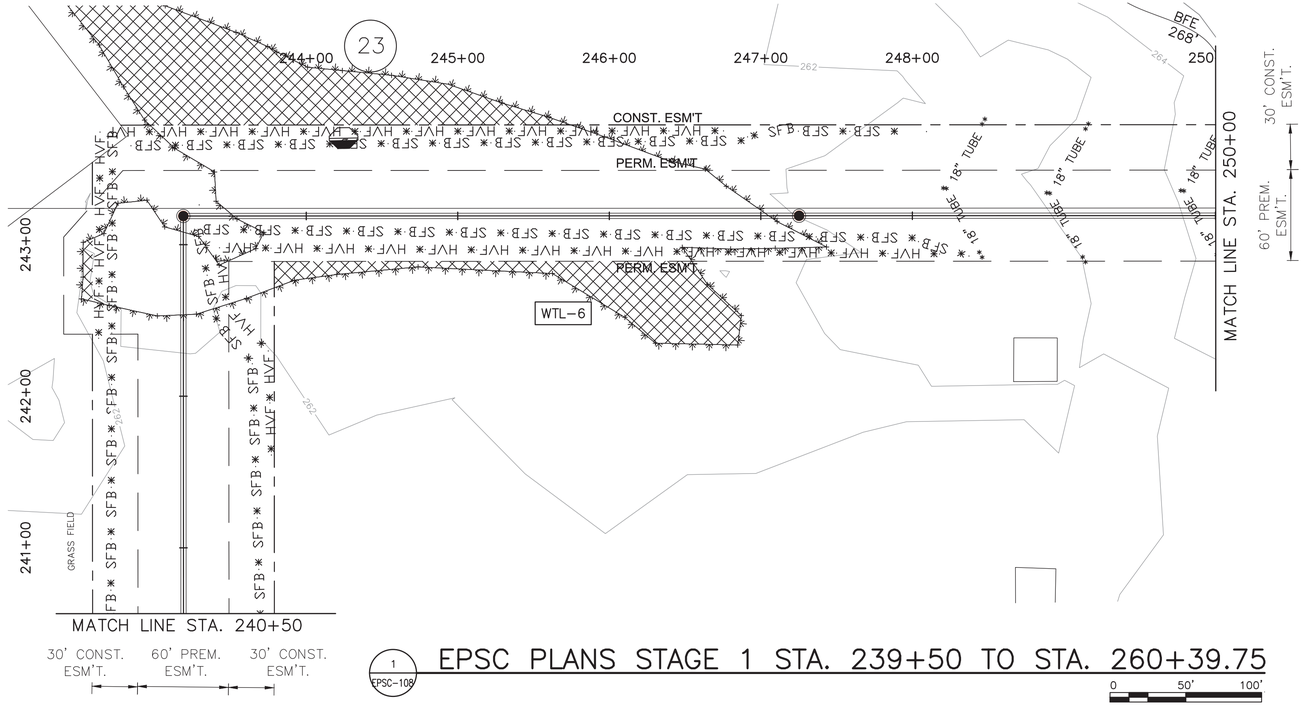
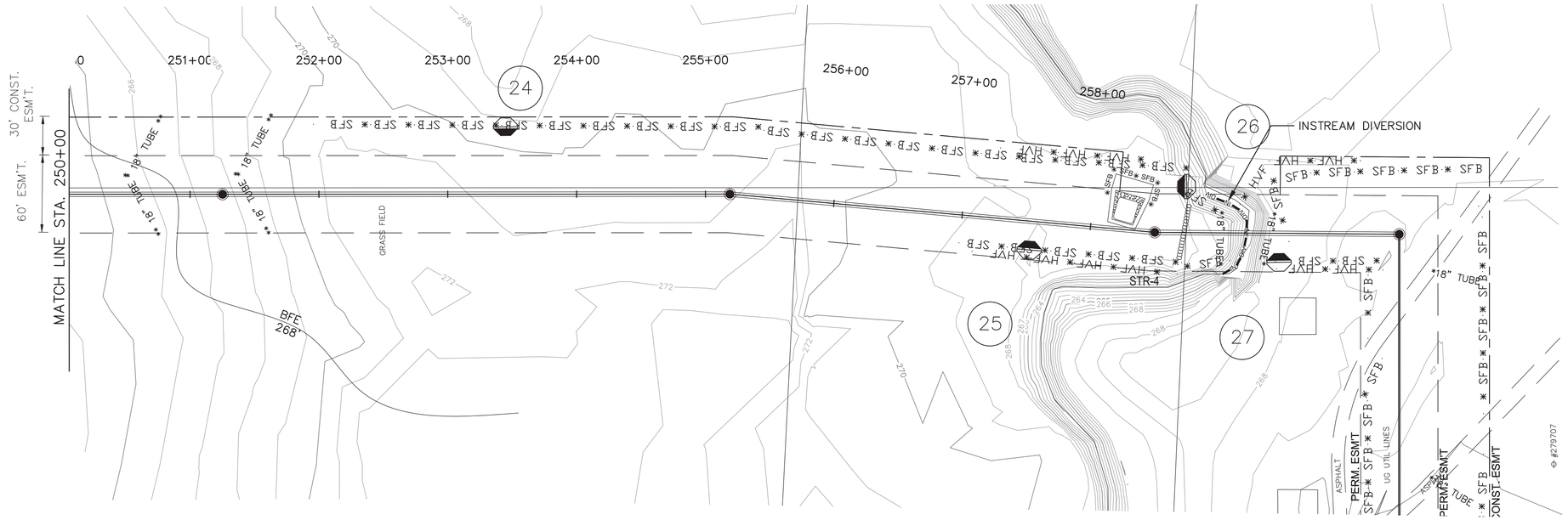
SEE DWG. C-115



1 EPSC-108 EPSC PLANS STAGE 1 STA. 239+50 TO STA. 260+39.75

0 50' 100'

SEE DWG. C-116



2 EPSC-108 EPSC PLANS STAGE 1 STA. 239+50 TO STA. 260+39.75

0 50' 100'

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-108.DWG
ENGR./ARCH.:	DV
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CHECKED BY:	DV
DATE:	03/02/2021

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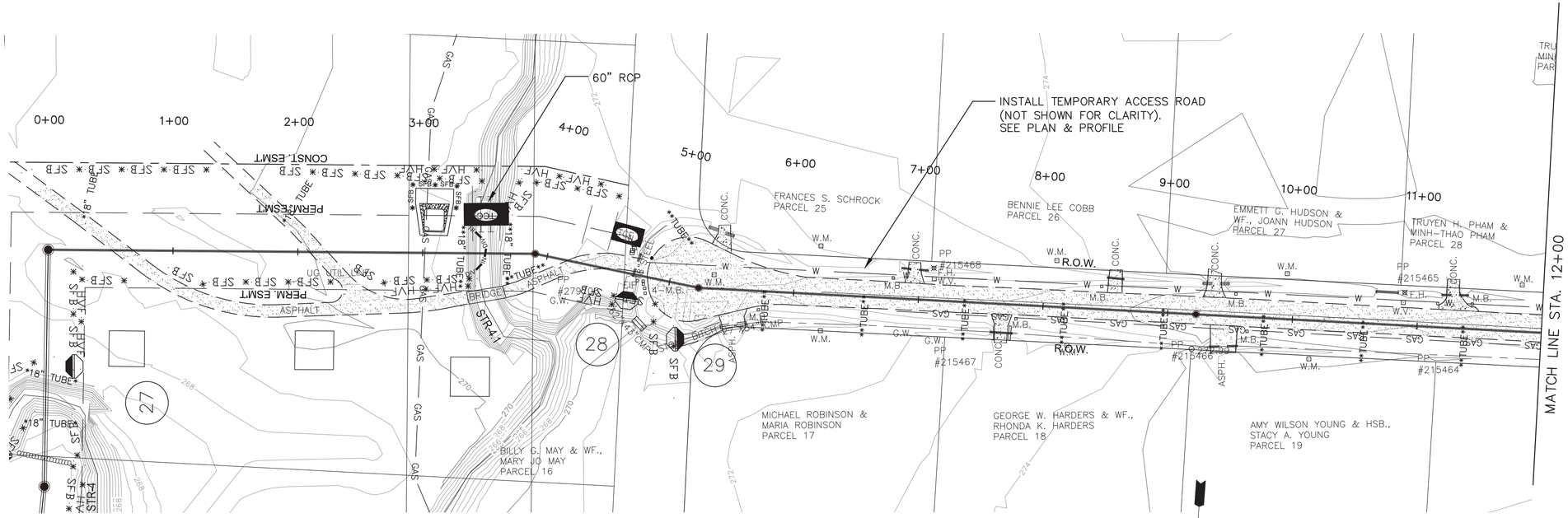
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 240+50
TO
STA. 260+39.75

DRAWING NO.
EPSC-108

SHEET 51 OF 87

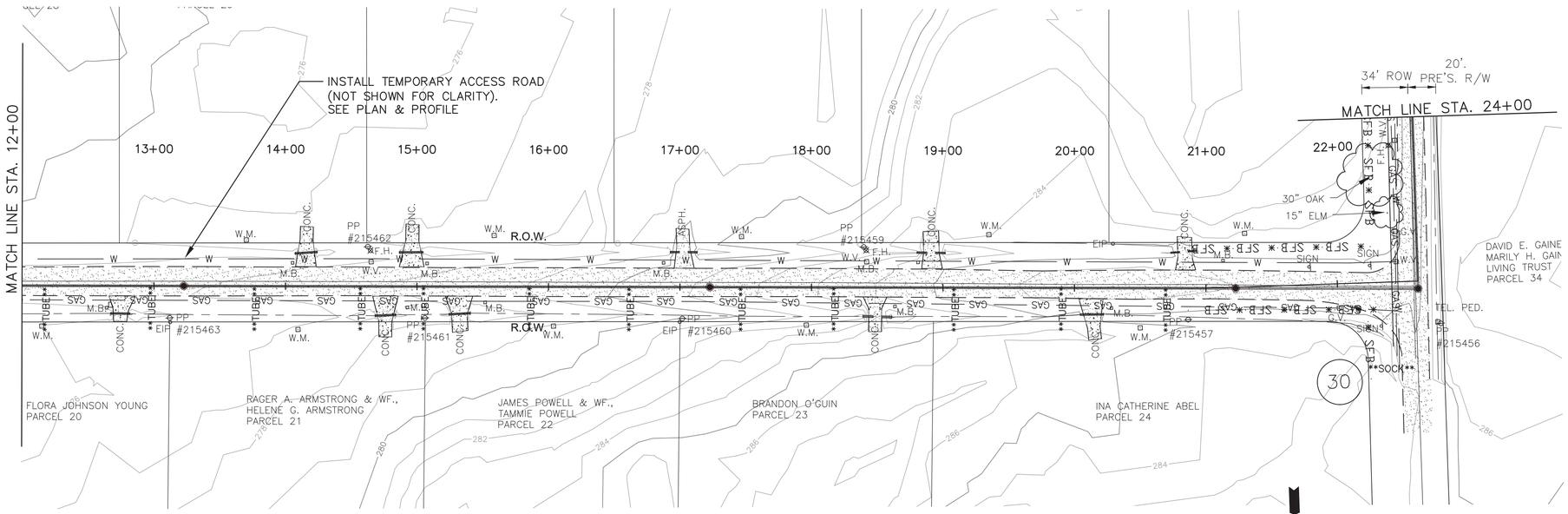
SEE DWG. C-117



1 EPSC-109 EPSC PLANS STAGE 1 18" PIPE STA. 0+00 TO STA. 24+00

0 50' 100'

SEE DWG. C-118



2 EPSC-109 EPSC PLANS STAGE 1 18" PIPE STA. 0+00 TO STA. 24+00

0 50' 100'

BUCHART HORN
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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-109.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

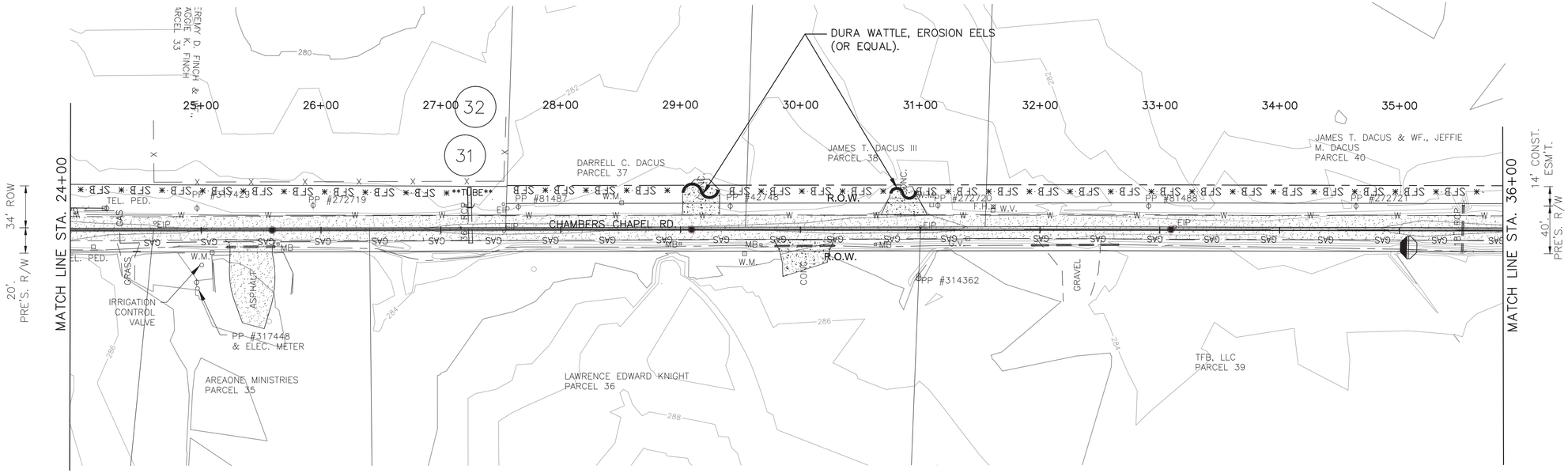
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 0+00
TO
STA. 24+00

DRAWING NO.
EPSC-109

SHEET 52 OF 87

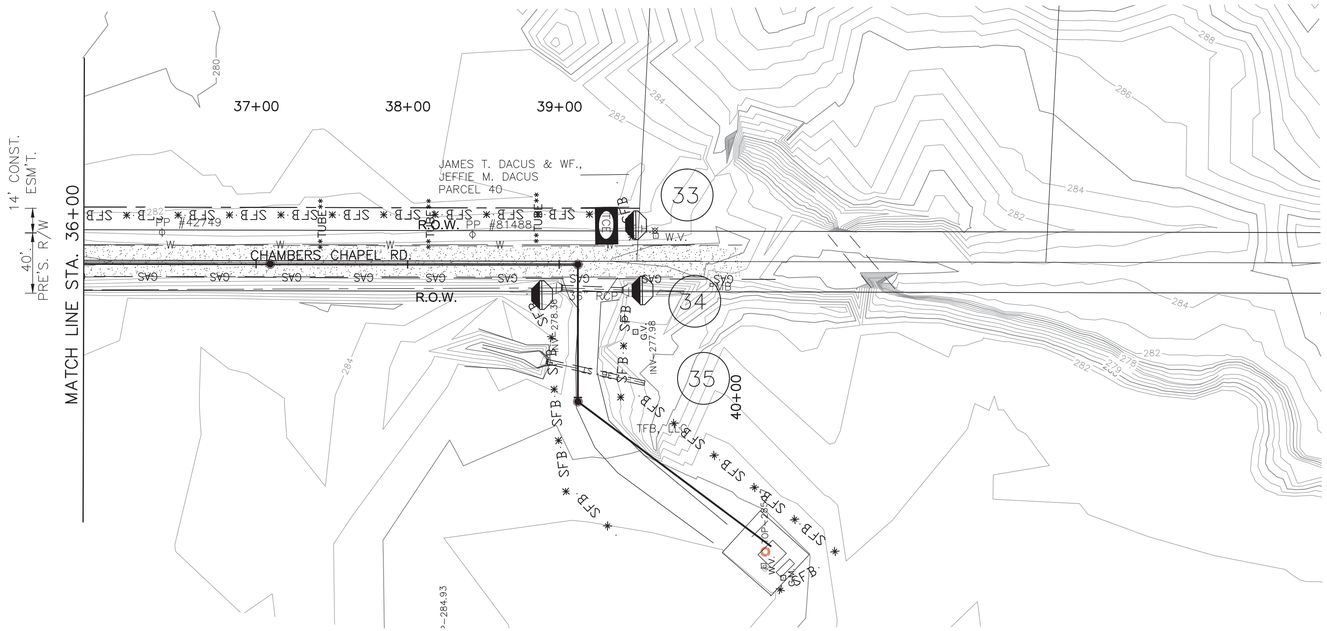
SEE DWG. C-119



1 EPSC-110 EPSC PLANS STAGE 1 18" & 10" PIPE STA. 24+00 TO STA. 39+18.23

0 50' 100'

SEE DWG. C-120



2 EPSC-110 EPSC PLANS STAGE 1 18" & 10" PIPE STA. 24+00 TO STA. 39+18.23

0 50' 100'

BUCHART HORN ENGINEERS • ARCHITECTS • PLANNERS

REGISTERED PROFESSIONAL ENGINEER STATE OF FLORIDA 68216 DAVID C. VESELKA 03/16/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-110.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 24+00
TO
STA. 39+52.94

DRAWING NO.
EPSC-110

SHEET 53 OF 87

SEE DWG. C-121

1 EPSC-111 EPSC PLANS STAGE 1 10" PIPE STA. 500+00 TO STA. 512+61.24

0 50' 100'

N

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

PLANNED BY C. VESSELL BUCHART HORN REGISTERED PROFESSIONAL ENGINEER STATE OF TENNESSEE 7/18/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-111.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 1
STA. 500+00
TO
STA. 512+61.24

DRAWING NO.
EPSC-111

SHEET 54 OF 87

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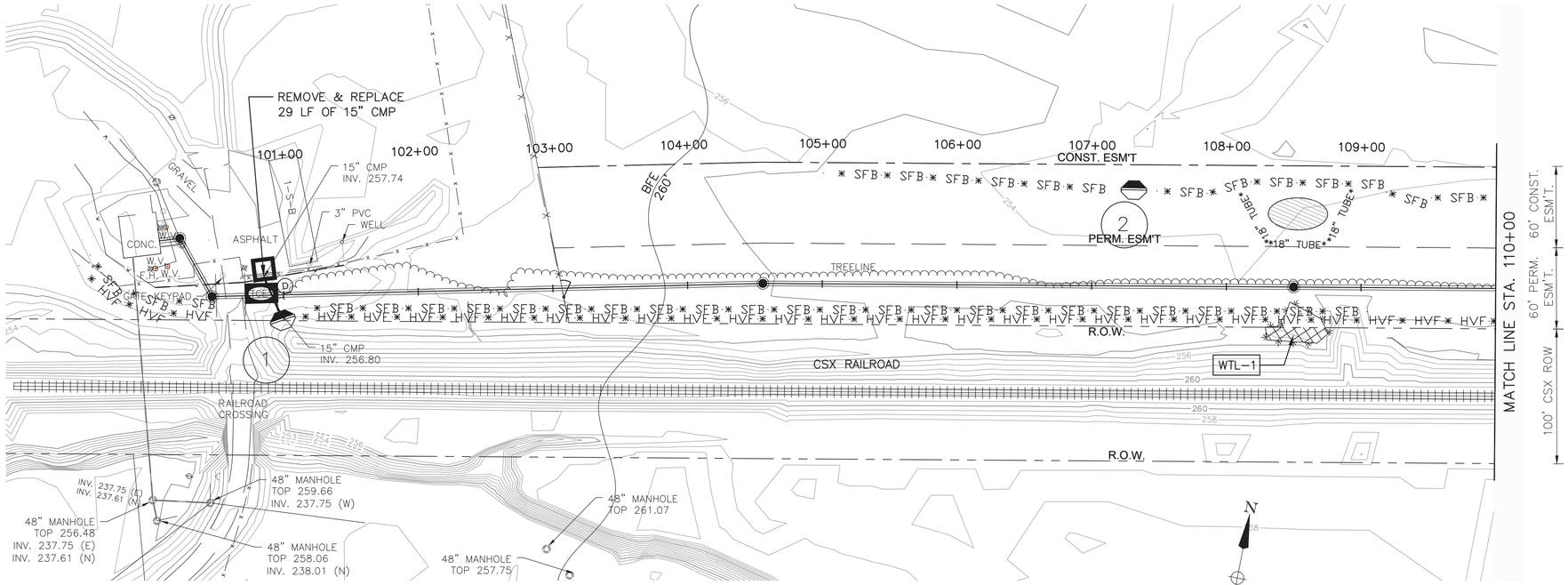
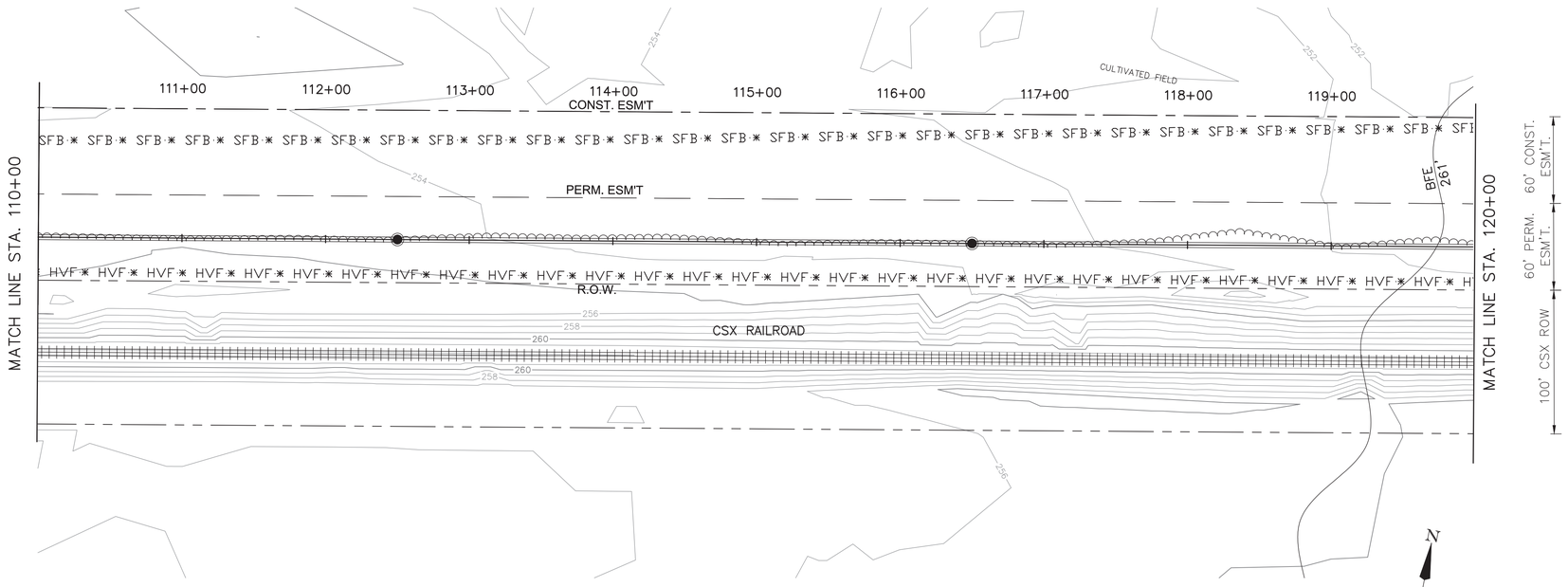
SEE DWG. C-101



1 EPSC-112 EPSC PLANS STAGE 2 STA. 99+82.20 TO STA. 120+00

SEE DWG. C-102



2 EPSC-112 EPSC PLANS STAGE 2 STA. 99+82.20 TO STA. 120+00

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-112.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

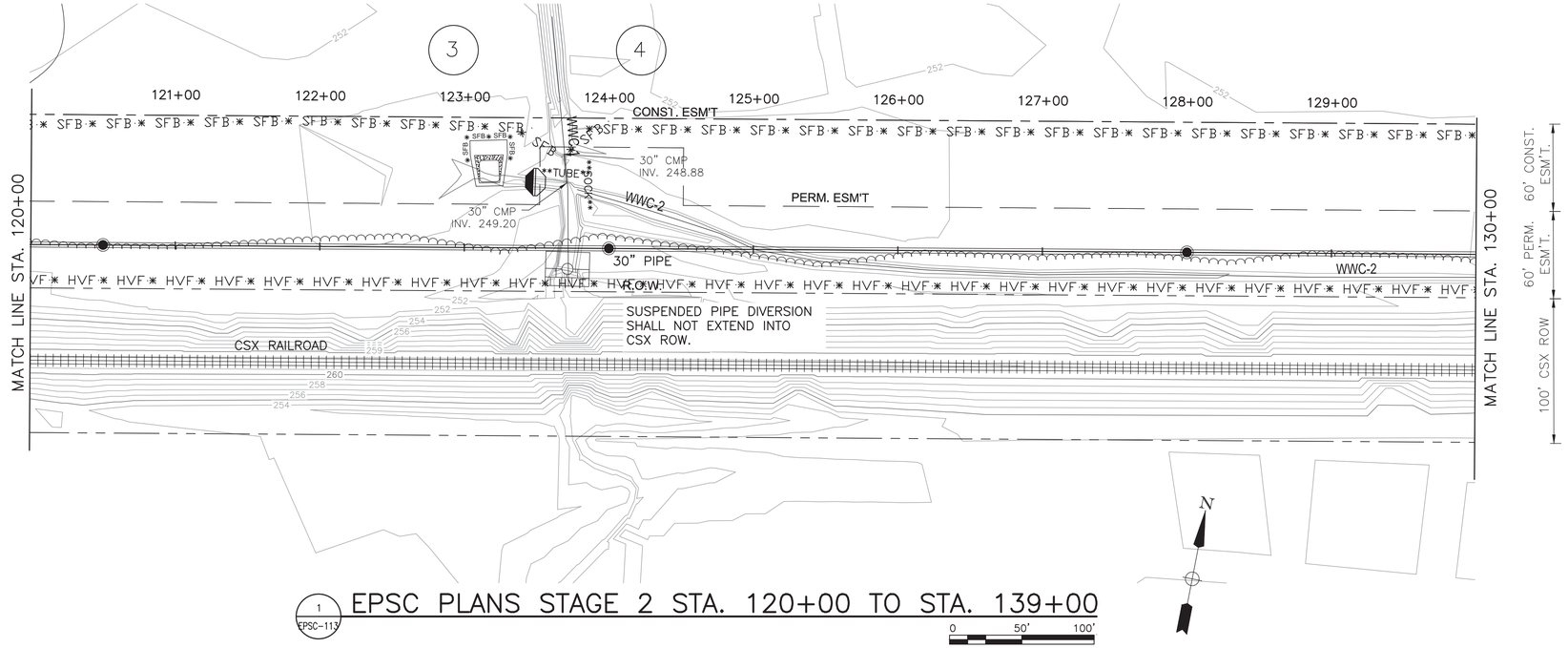
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 2
STA. 99+82.20
TO
STA. 120+00

DRAWING NO.
EPSC-112

SHEET 55 OF 87

SEE DWG. C-103



1 EPSC-113

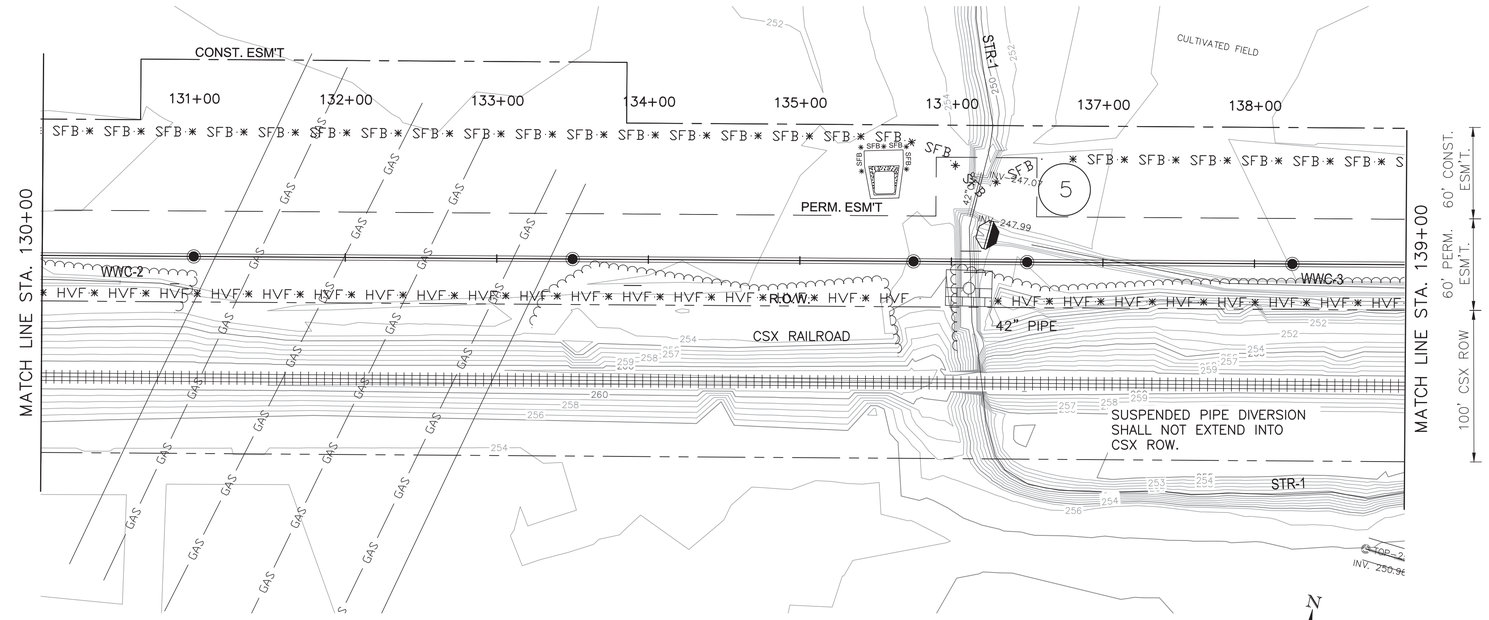
EPSC PLANS STAGE 2 STA. 120+00 TO STA. 139+00

0 50' 100'

NOTE:

SUSPENDED PIPE DIVERSION SHALL BE USED IN WWC TO PASS OFFSITE FLOW THROUGH SITE NON-EROSIVELY.

SEE DWG. C-104



2 EPSC-113

EPSC PLANS STAGE 2 STA. 120+00 TO STA. 139+00

0 50' 100'

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ENGINEERS • ARCHITECTS • PLANNERS

DANE C. VERSLUIS
REGISTERED ENGINEER
STATE OF FLORIDA
No. 69824
07/18/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-113.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

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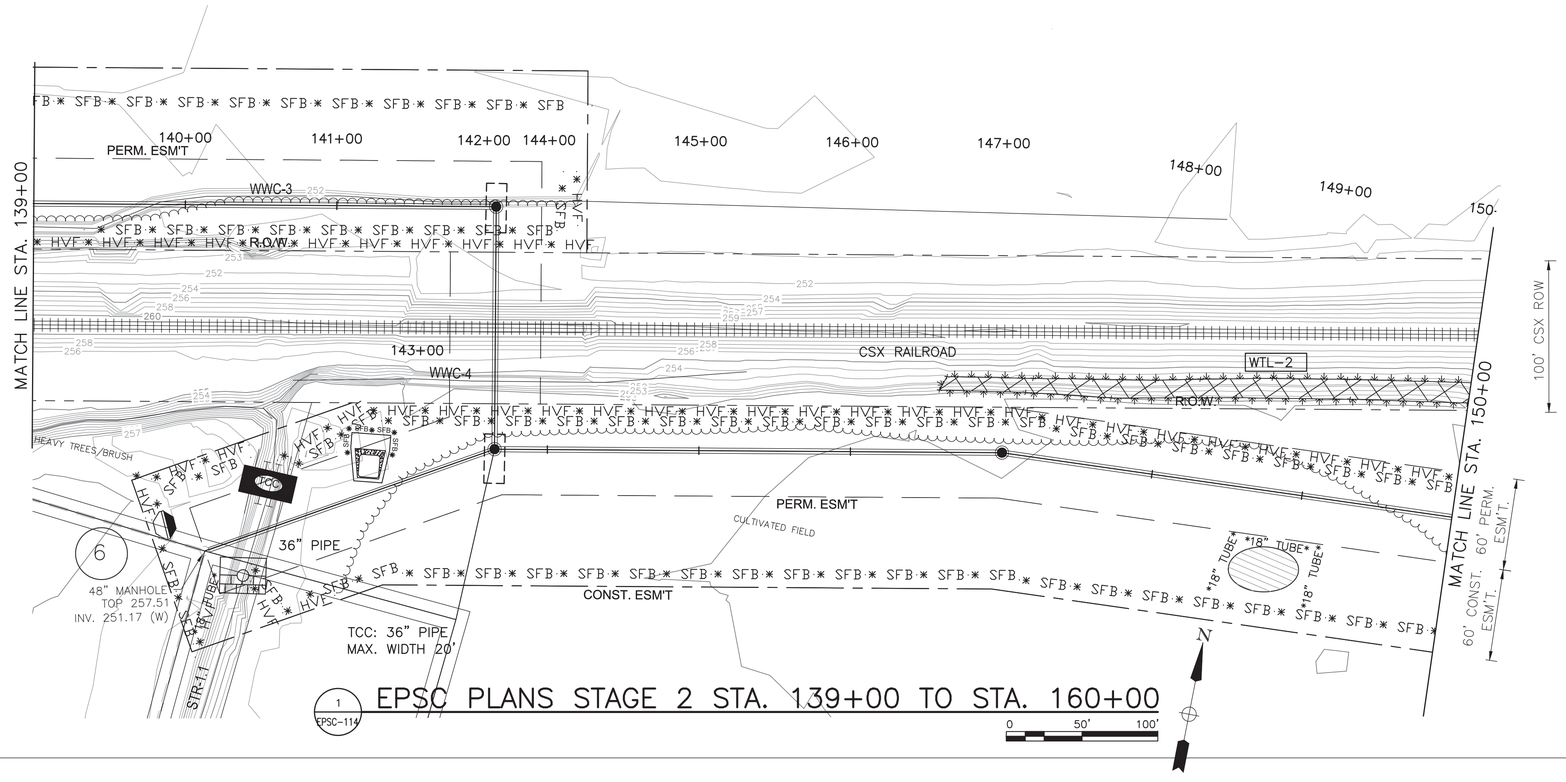
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 2
STA. 120+00
TO
STA. 139+00

DRAWING NO.
EPSC-113

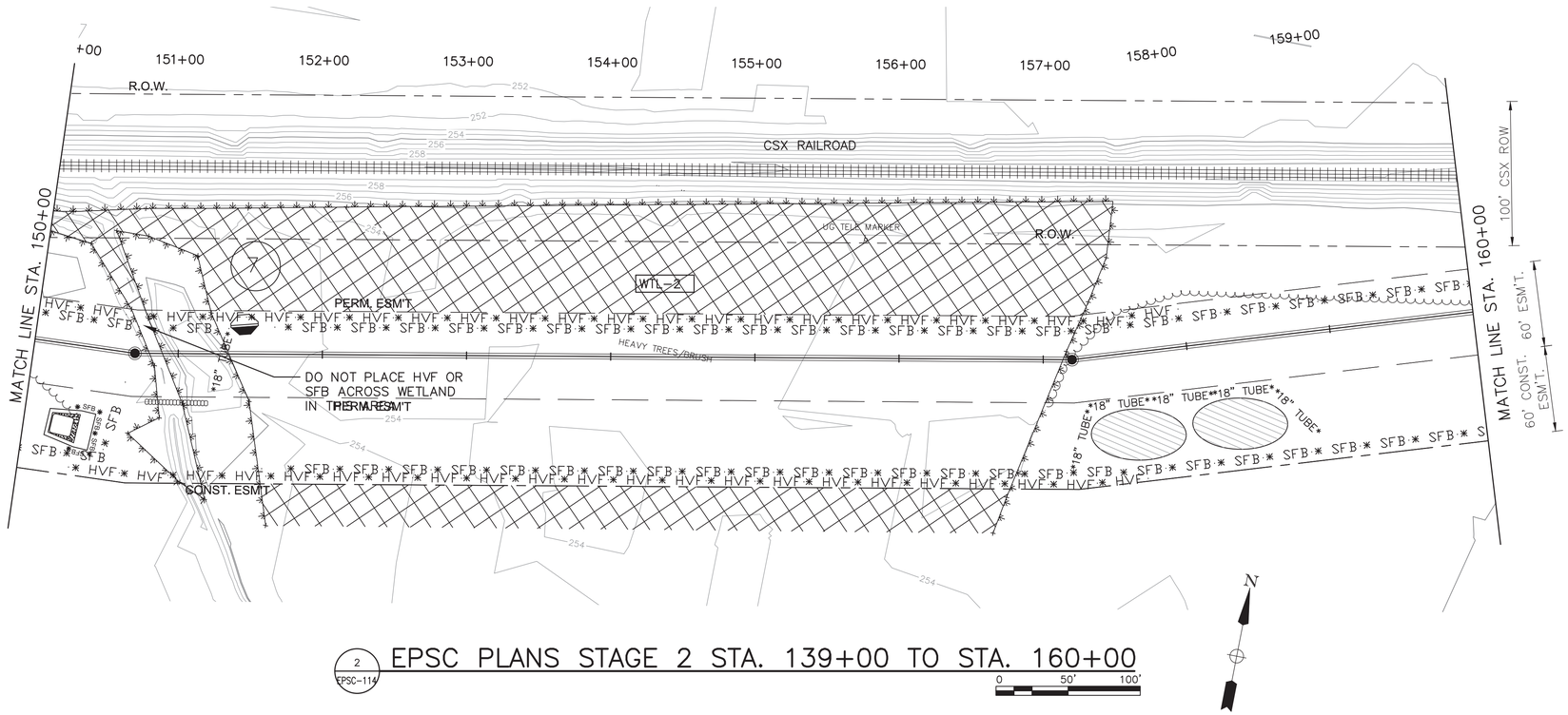
SHEET 56 OF 87

SEE DWG. C-105



1 EPSC-114 EPSC PLANS STAGE 2 STA. 139+00 TO STA. 160+00

SEE DWG. C-106



2 EPSC-114 EPSC PLANS STAGE 2 STA. 139+00 TO STA. 160+00

0 50' 100'

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

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PROJECT NO.:	77202-00
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EPSC PLAN
STAGE 2
STA. 139+00
TO
STA. 160+00

DRAWING NO.
EPSC-114

SHEET 57 OF 87

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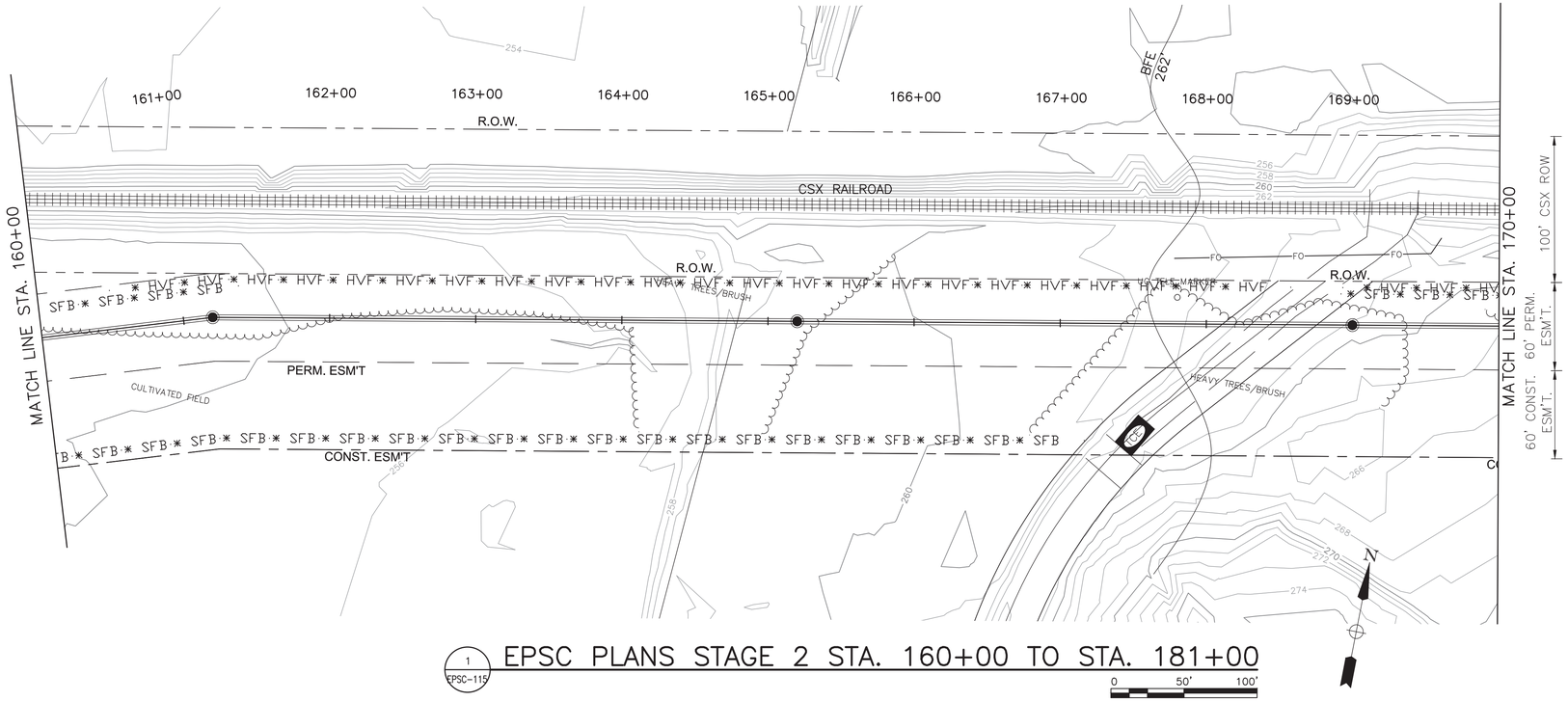
SEE DWG. C-107

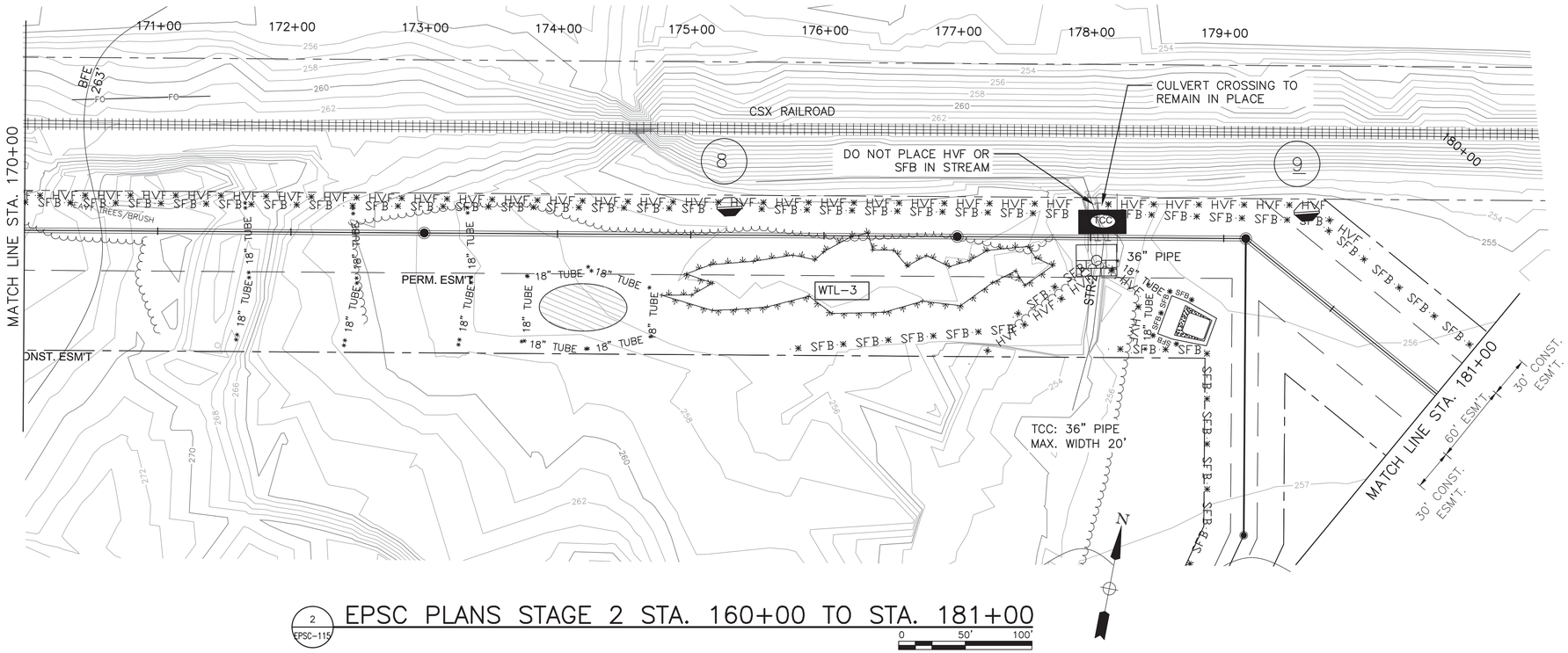


1 EPSC-115

EPSC PLANS STAGE 2 STA. 160+00 TO STA. 181+00

0 50' 100'

SEE DWG. C-108



2 EPSC-115

EPSC PLANS STAGE 2 STA. 160+00 TO STA. 181+00

0 50' 100'

BUCHART HORN
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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-115.DWG
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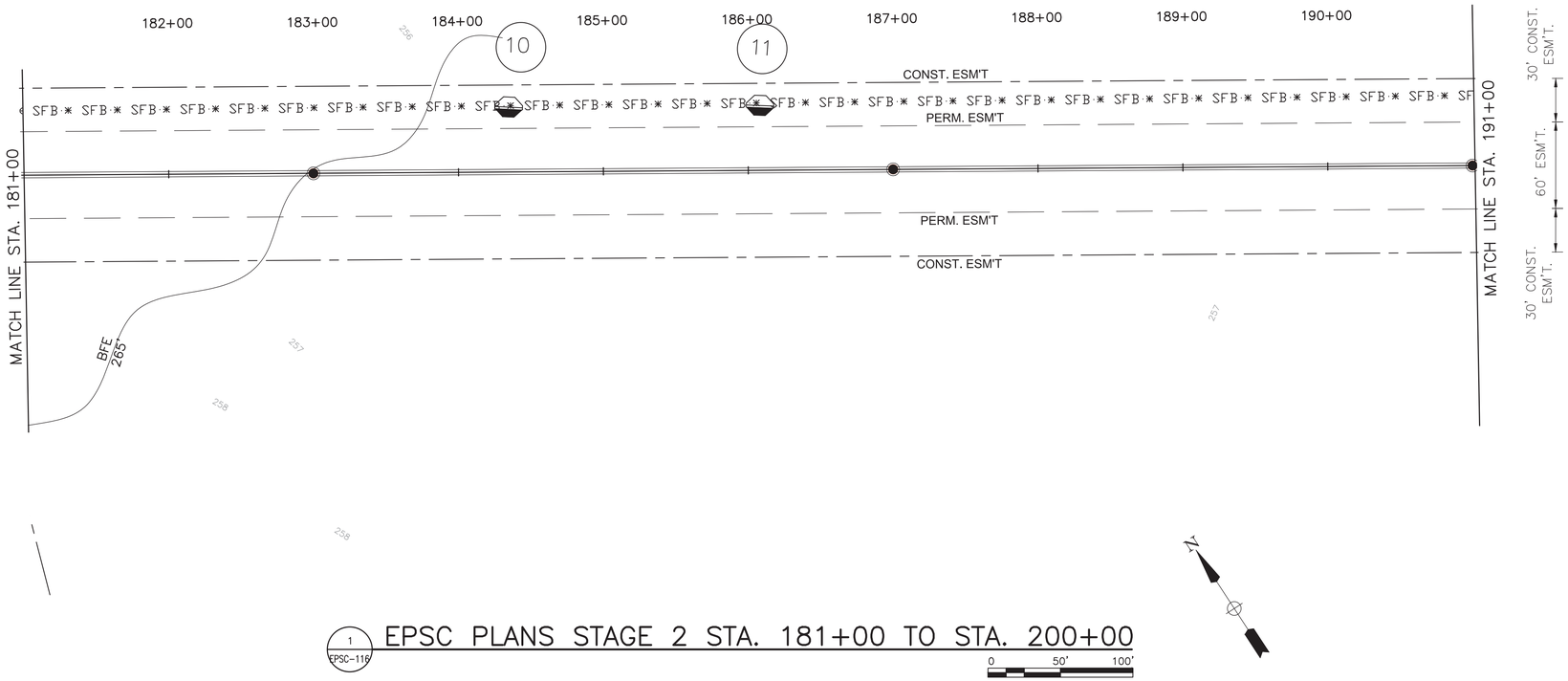
EPSC PLAN
STAGE 2
STA. 160+00
TO
STA. 181+00

DRAWING NO.
EPSC-115

SHEET 58 OF 87

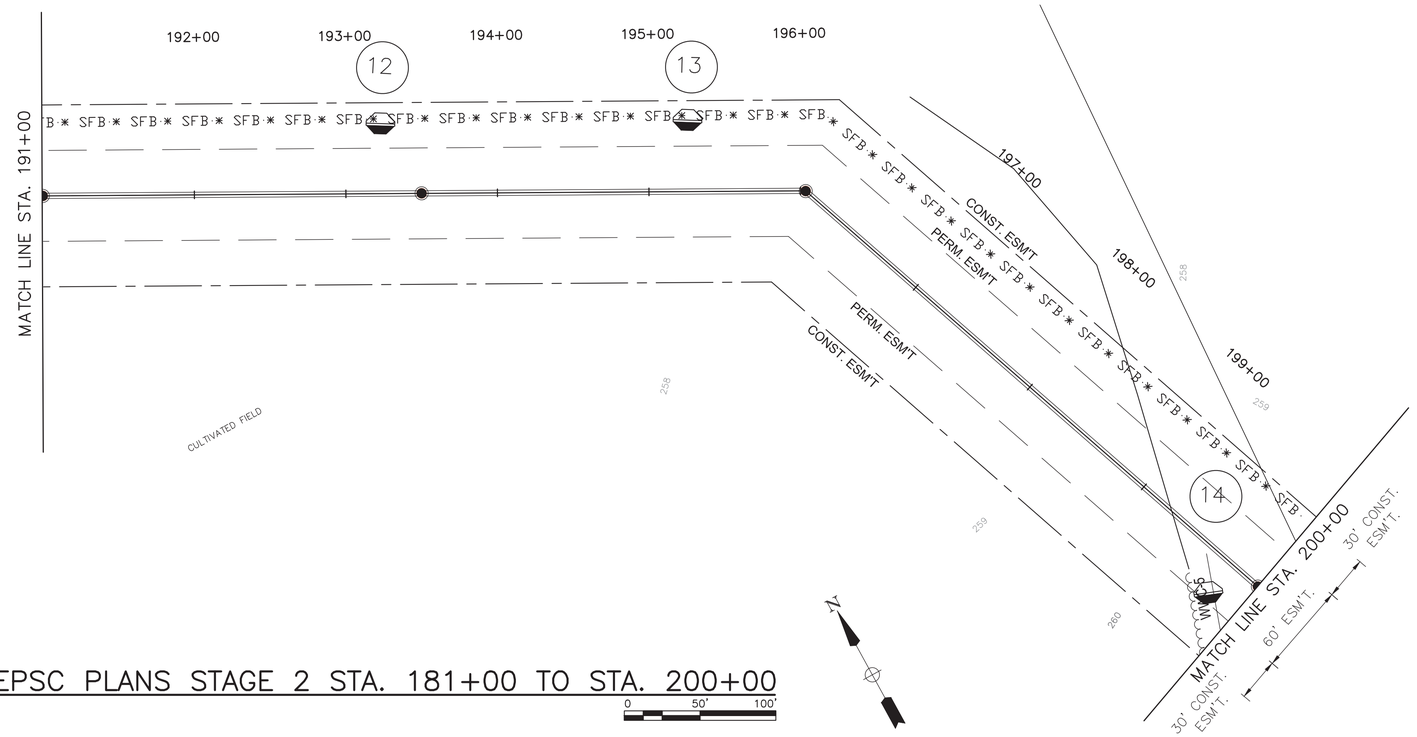
SEE DWG. C-109



1 EPSC-116 EPSC PLANS STAGE 2 STA. 181+00 TO STA. 200+00

0 50' 100'

SEE DWG. C-110



2 EPSC-116 EPSC PLANS STAGE 2 STA. 181+00 TO STA. 200+00

0 50' 100'

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

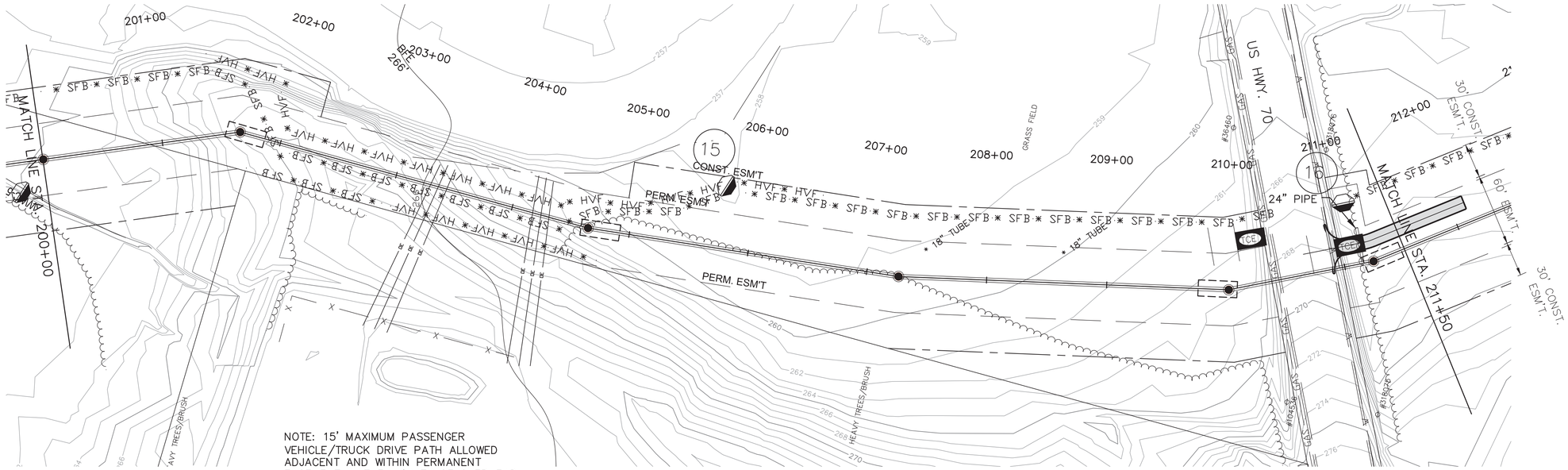
PROJECT NO.:	77202-00
CAD FILE:	EPSC-116.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 2
STA. 181+00
TO
STA. 200+00

DRAWING NO.
EPSC-116

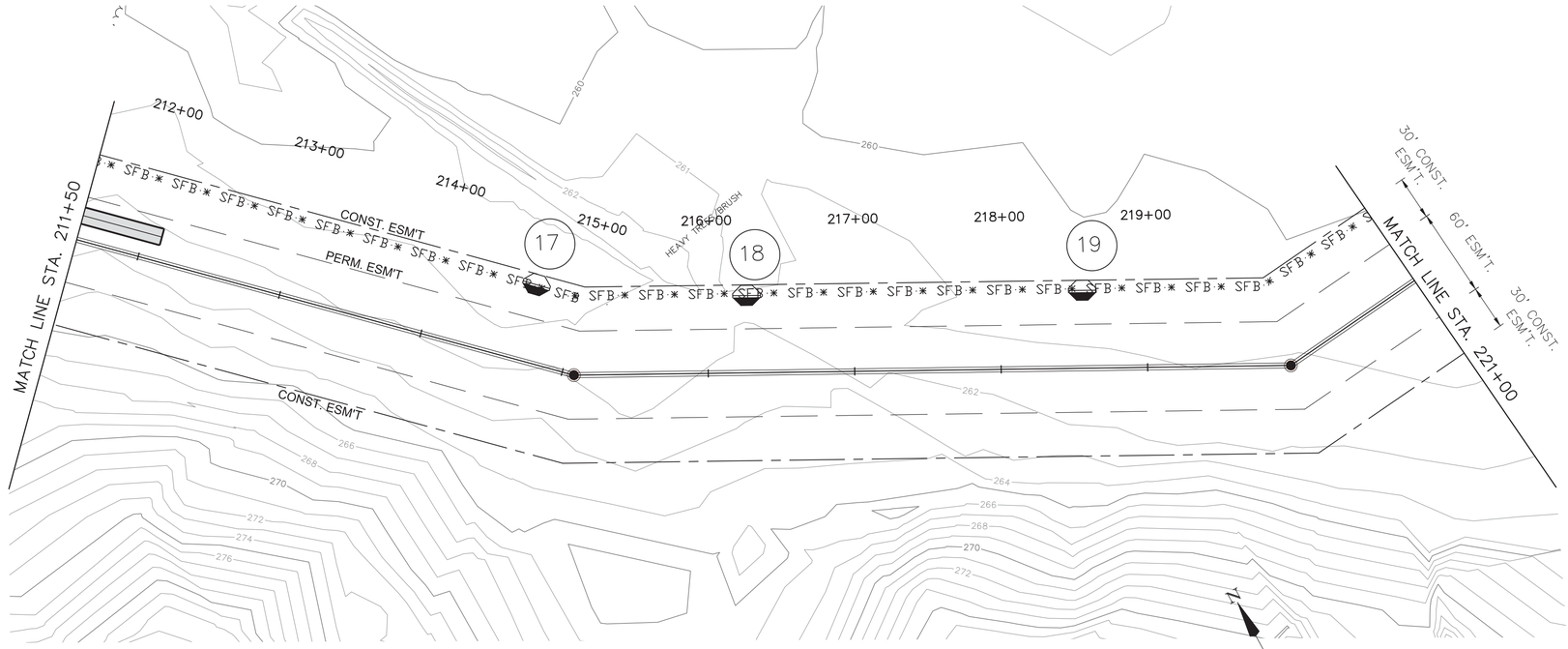
SEE DWG. C-111



1 EPSC-117 EPSC PLANS STAGE 2 STA. 200+00 TO STA. 221+00

0 50' 100'

SEE DWG. C-112



2 EPSC-117 EPSC PLANS STAGE 2 STA. 200+00 TO STA. 221+00

0 50' 100'

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

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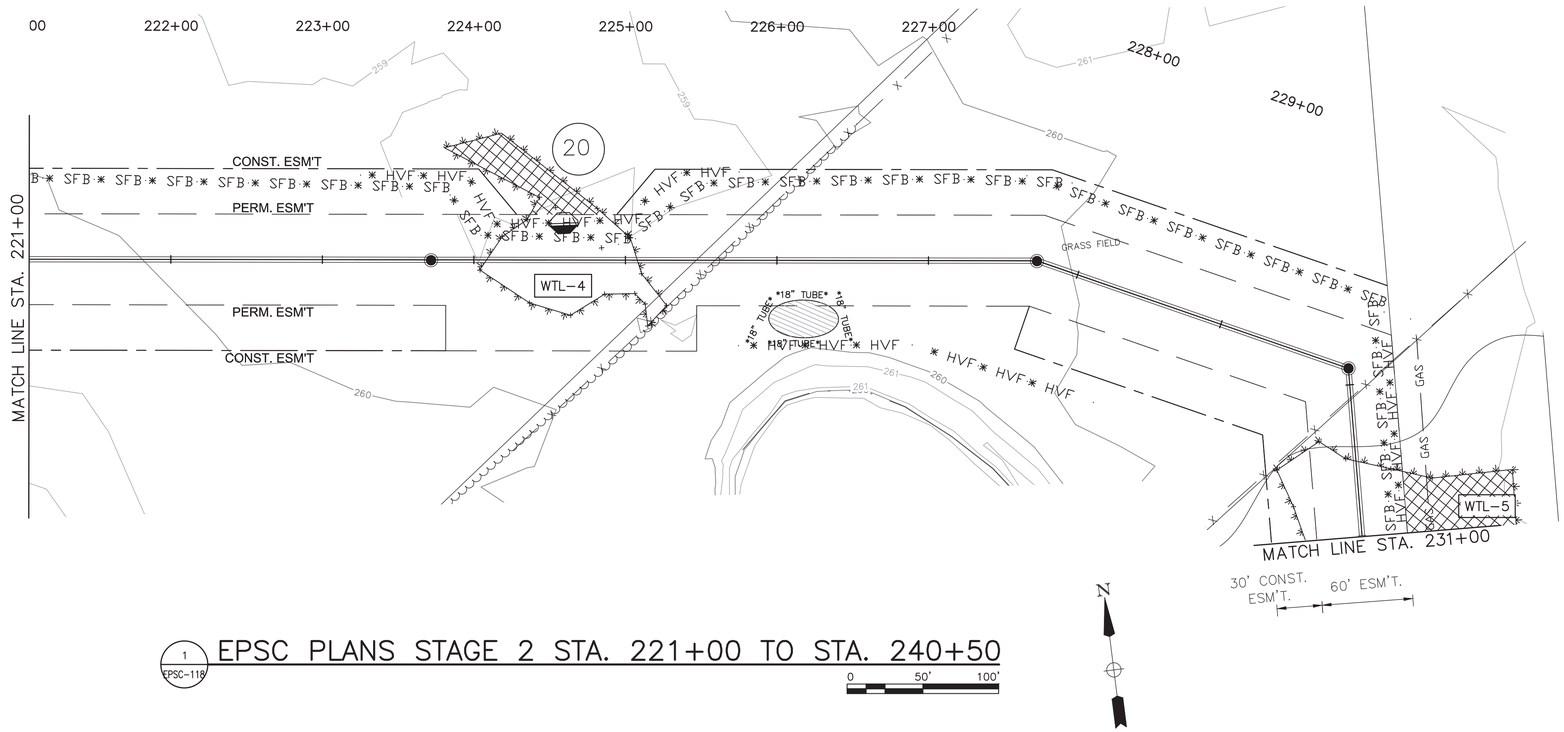
EPSC PLAN
STAGE 2
STA. 200+00
TO
STA. 221+00

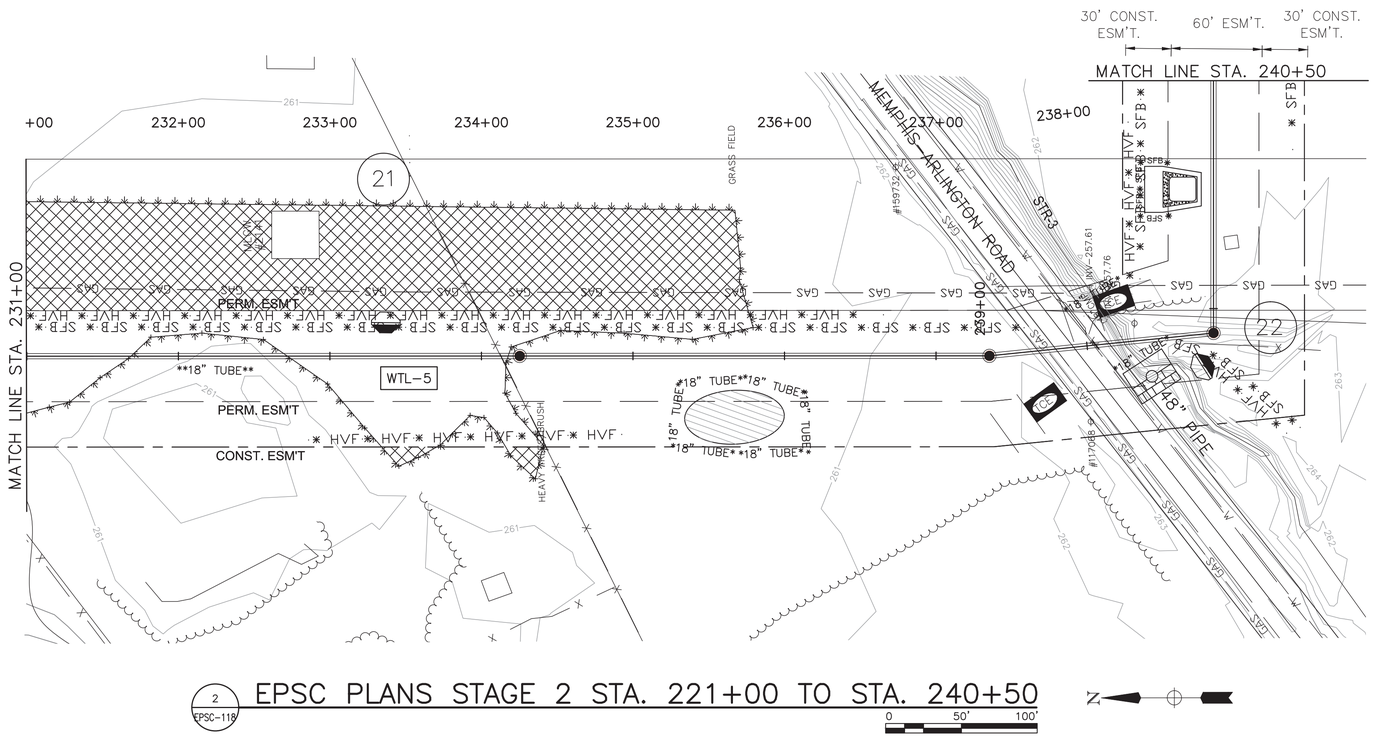
DRAWING NO.
EPSC-117

SHEET 60 OF 87



1 EPSC-118 EPSC PLANS STAGE 2 STA. 221+00 TO STA. 240+50

0 50' 100'



2 EPSC-118 EPSC PLANS STAGE 2 STA. 221+00 TO STA. 240+50

0 50' 100'

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-118.DWG
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DESIGN BY:	DV
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CHECKED BY:	DV
DATE:	03/02/2021

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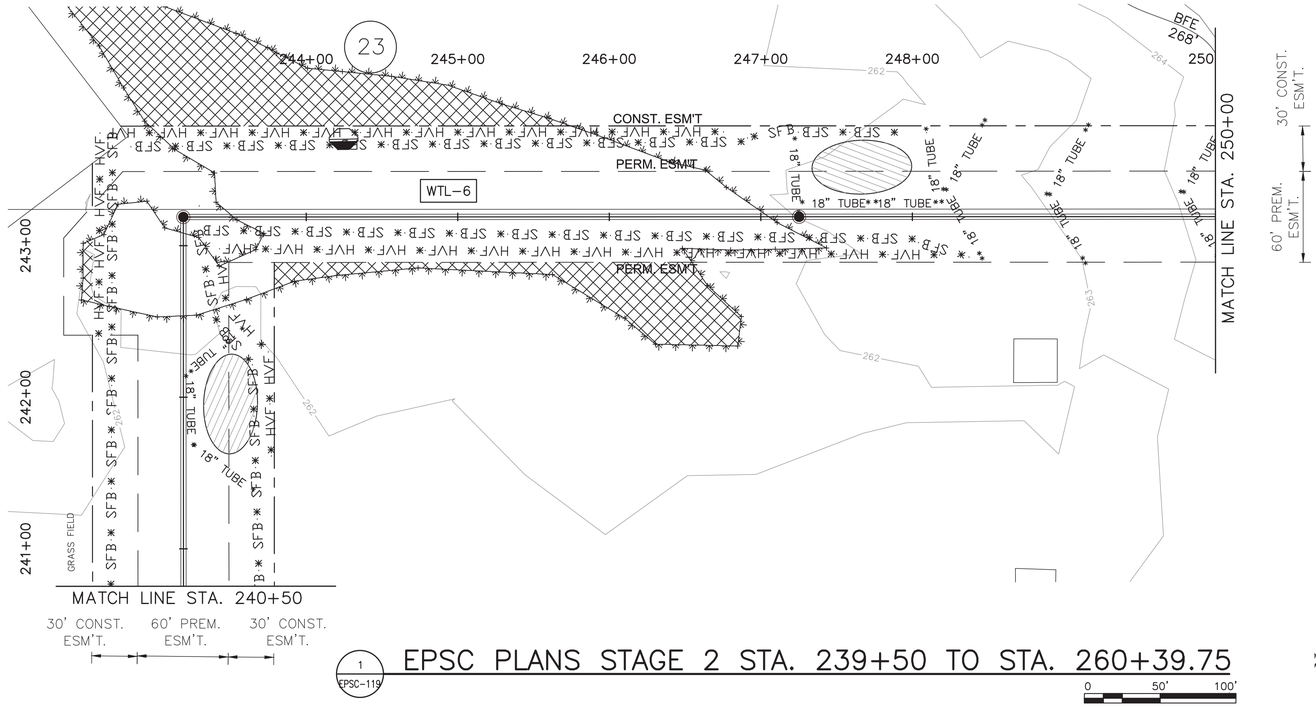
EPSC PLAN
STAGE 2
STA. 221+00
TO
STA. 240+50

DRAWING NO.
EPSC-118

SHEET 61 OF 87

SEE DWG. C-115



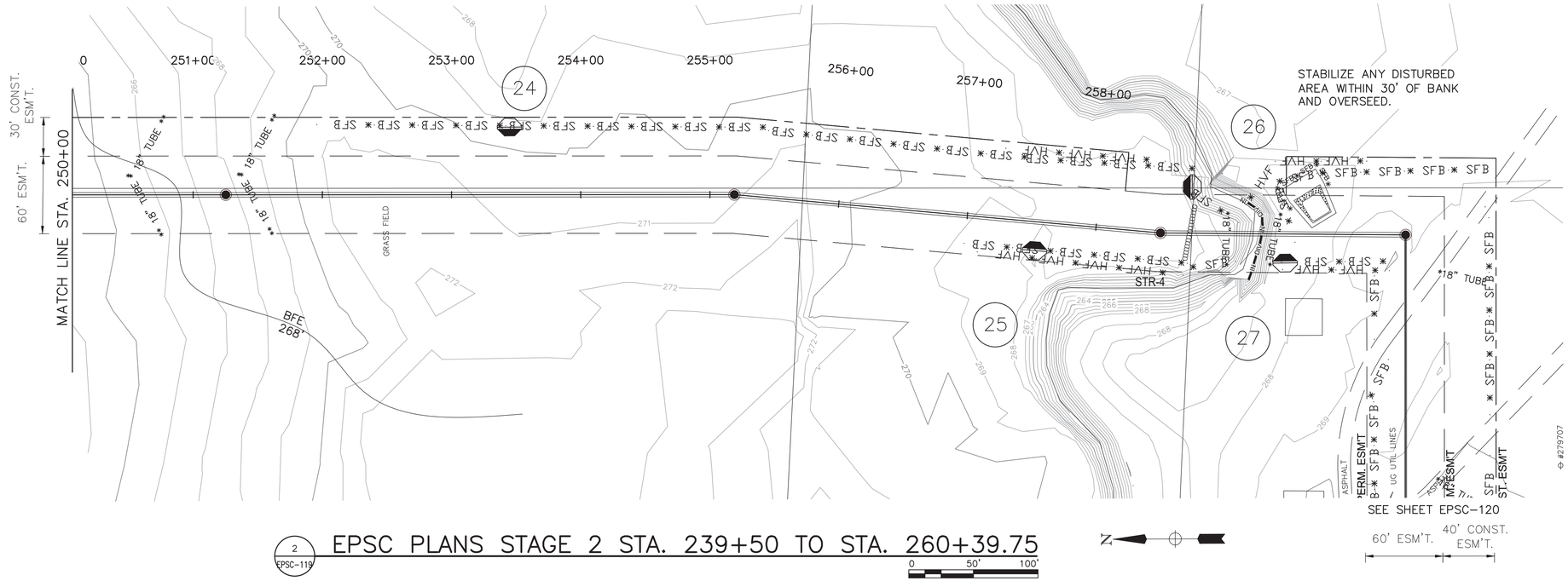
1 EPSC-119

EPSC PLANS STAGE 2 STA. 239+50 TO STA. 260+39.75

0 50' 100'

N

SEE DWG. C-116



2 EPSC-119

EPSC PLANS STAGE 2 STA. 239+50 TO STA. 260+39.75

0 50' 100'

N

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PROFESSIONAL ENGINEER — DAVID VERBLY — 70224 — STATE OF FLORIDA — 07/22/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-119.DWG
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CHECKED BY:	DV
DATE:	03/02/2021

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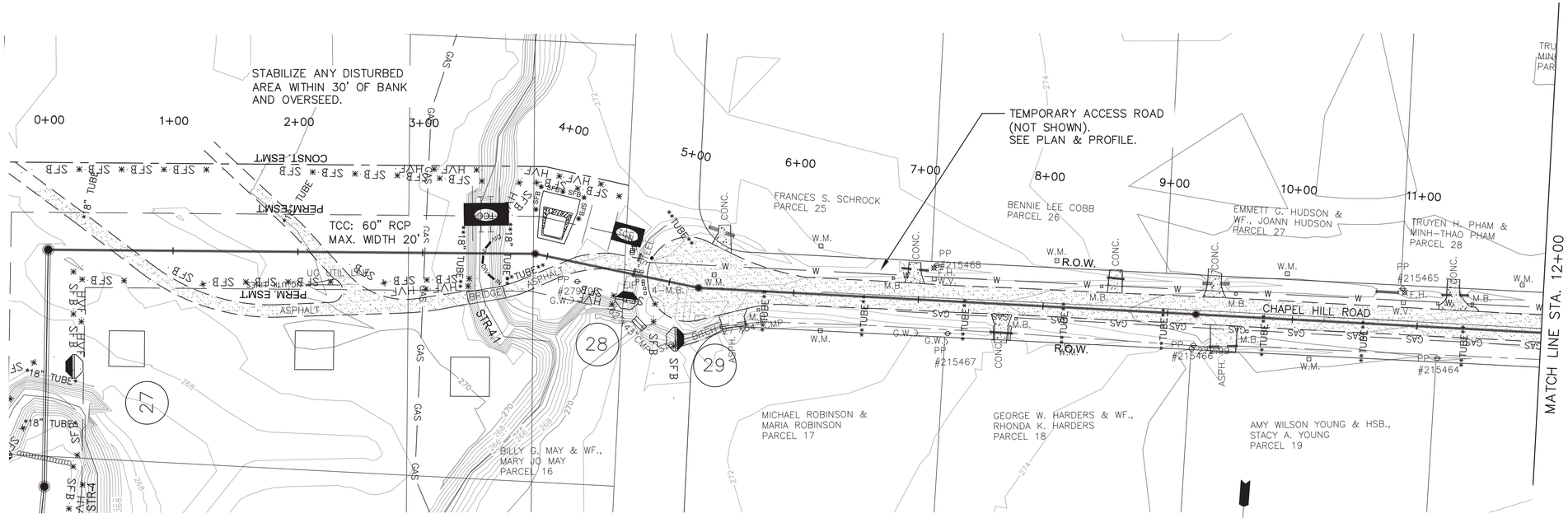
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 2
STA. 239+50
TO
STA. 260+39.75

DRAWING NO.
EPSC-119

SHEET 62 OF 87

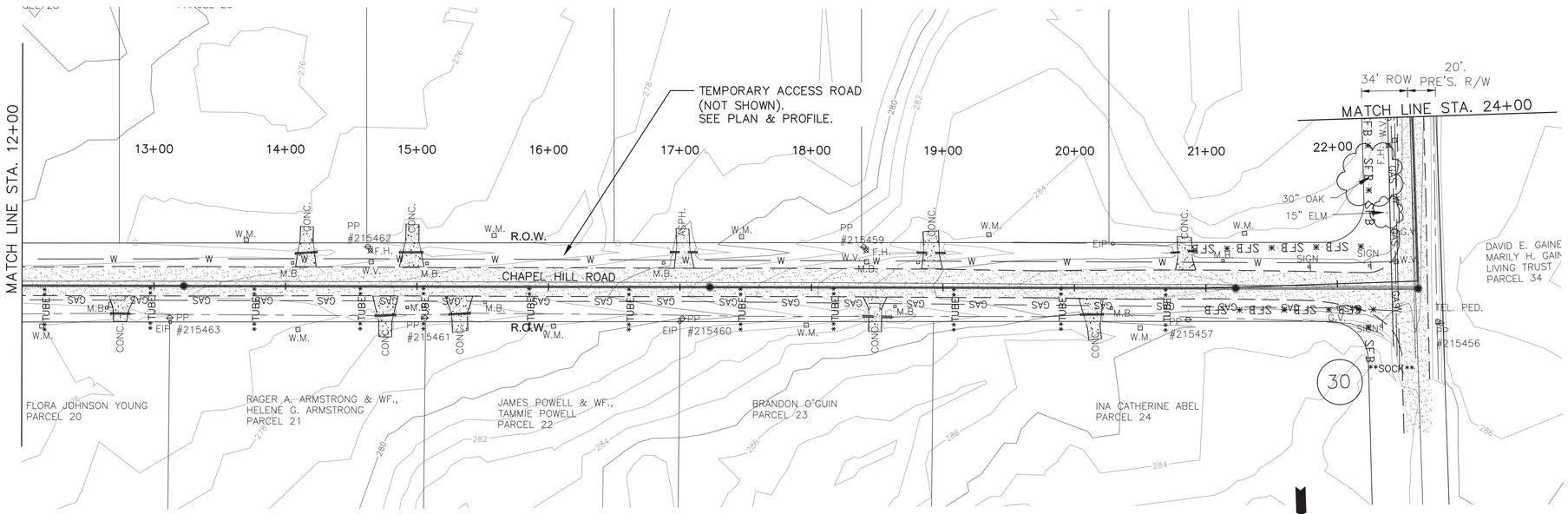
SEE DWG. C-117



1 EPSC-120 EPSC PLANS STAGE 2 18" PIPE STA. 0+00 TO STA. 24+00

0 50' 100'

SEE DWG. C-118



2 EPSC-120 EPSC PLANS STAGE 2 18" PIPE STA. 0+00 TO STA. 24+00

0 50' 100'

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-120.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

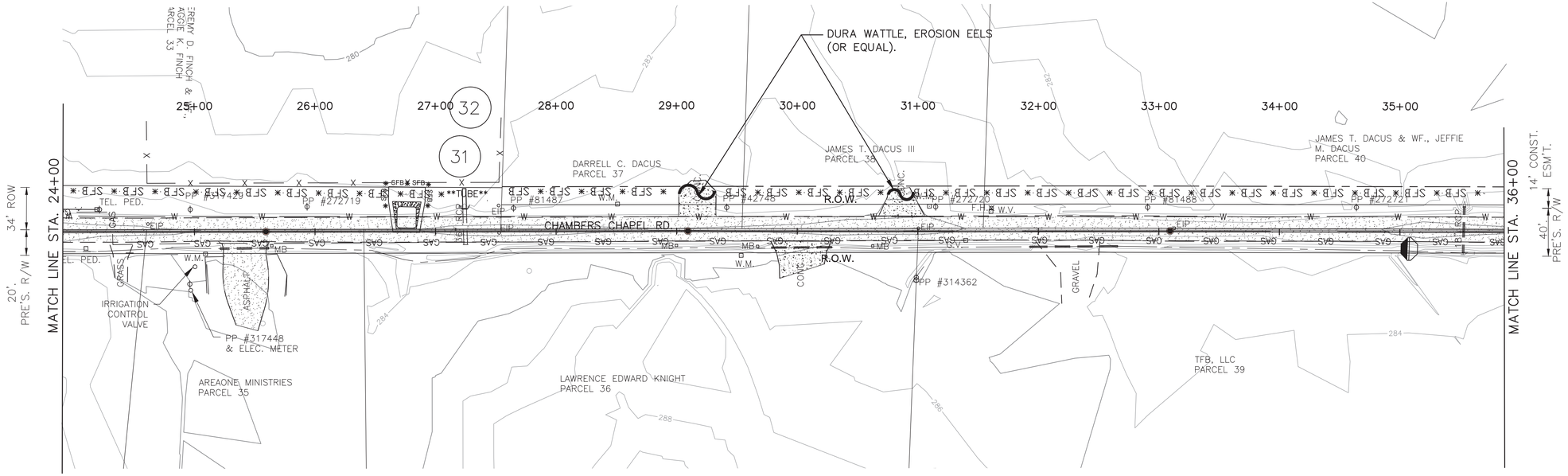
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN STAGE 2 STA. 0+00 TO STA. 24+00

DRAWING NO. EPSC-120

SHEET 63 OF 87

SEE DWG. C-119



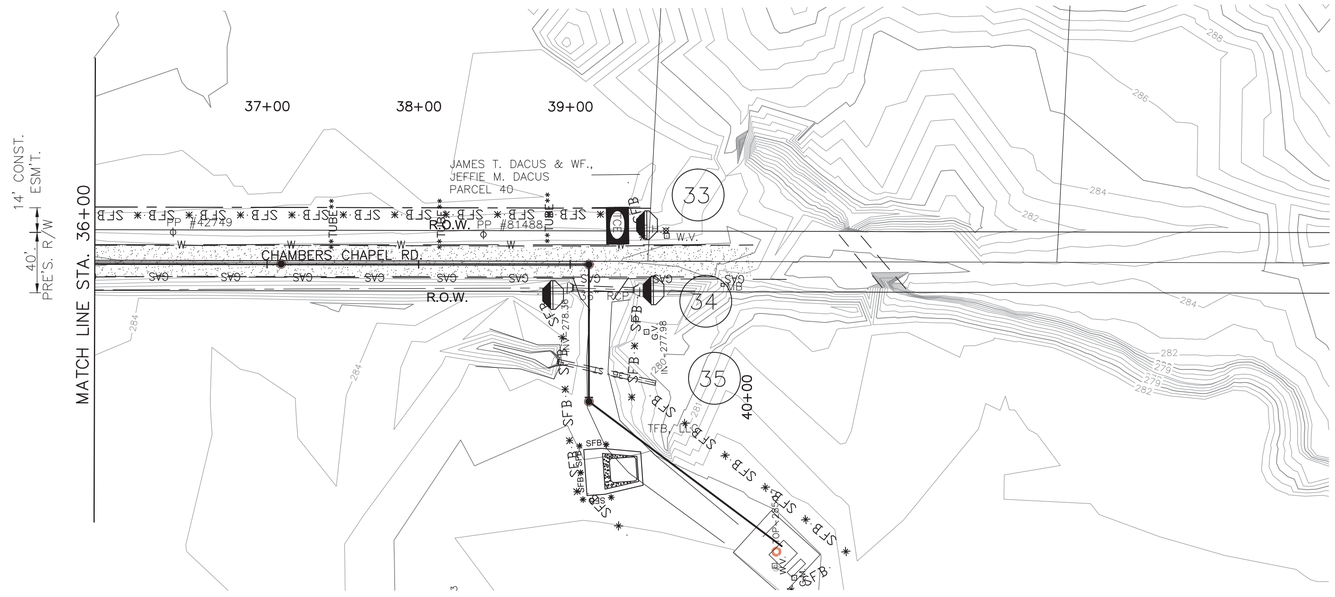
1 EPSC-121

EPSC PLANS STAGE 2 18" & 10" PIPE STA. 24+00 TO STA. 39+18.23

0 50' 100'

N

SEE DWG. C-120



2 EPSC-121

EPSC PLANS STAGE 2 18" & 10" PIPE STA. 24+00 TO STA. 39+18.23

0 50' 100'

N

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-121.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
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EPSC PLAN
STAGE 2
STA. 24+00
TO
STA. 39+52.94

DRAWING NO.
EPSC-121

SHEET 64 OF 87

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SEE DWG. C-121

1 EPSC-122 EPSC PLANS STAGE 2 10" PIPE STA. 500+00 TO STA. 512+61.24

0 50' 100'

N

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PLANNED BY C. VERDILY
REGISTERED ENGINEER
STATE OF TENNESSEE
7/6/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-122.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 2
10" LINE
STA. 500+00
TO
STA. 512+61.24

DRAWING NO.
EPSC-122

SHEET 65 OF 87

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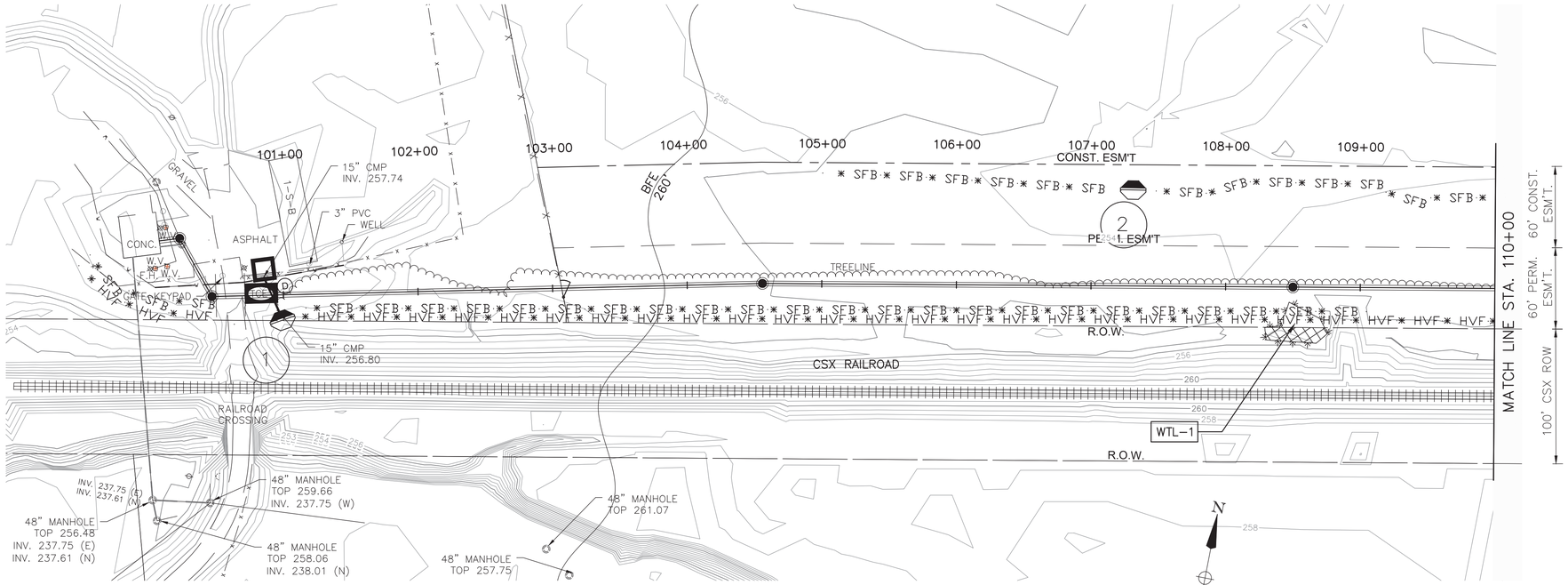
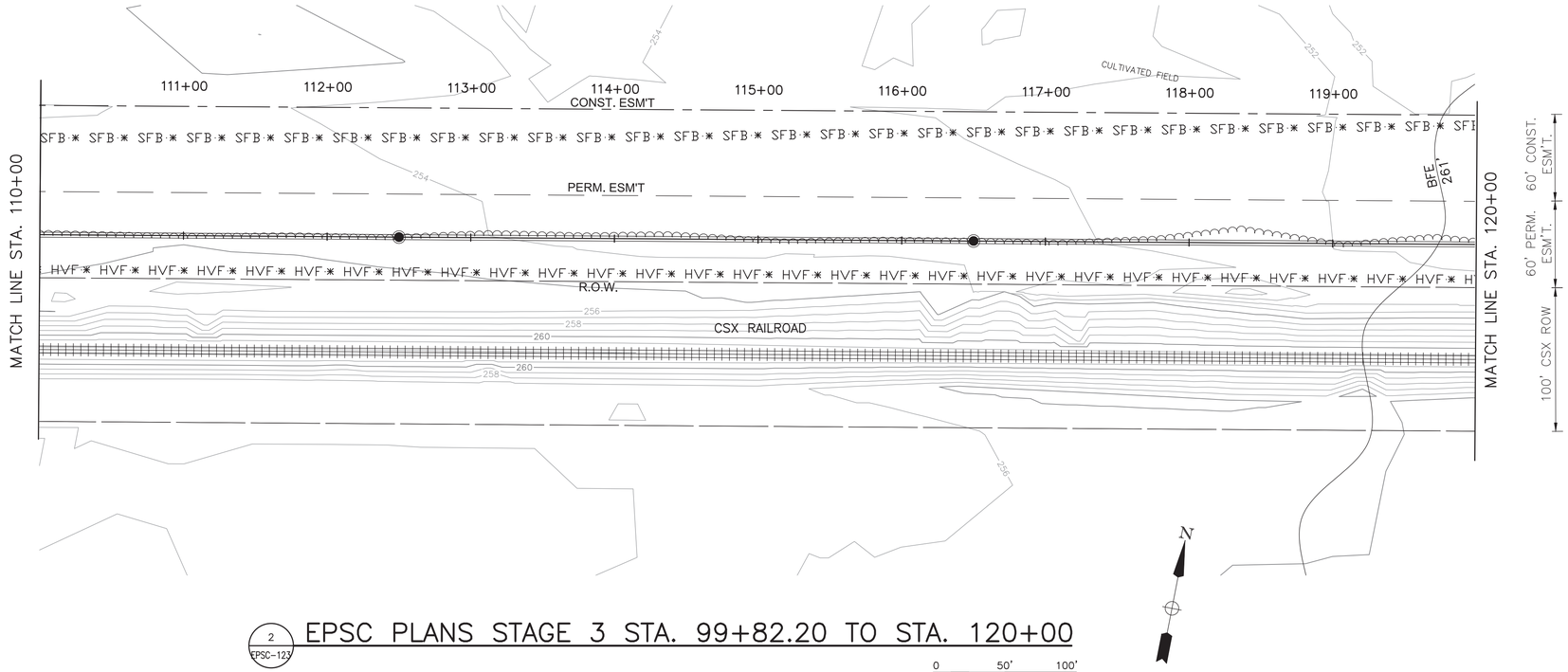
SEE DWG. C-101



1 EPSC-123

EPSC PLANS STAGE 3 STA. 99+82.20 TO STA. 120+00

SEE DWG. C-102



2 EPSC-123

EPSC PLANS STAGE 3 STA. 99+82.20 TO STA. 120+00

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7/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-123.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 3
STA. 99+82.20
TO
STA. 120+00

DRAWING NO.
EPSC-123

SHEET 66 OF 87

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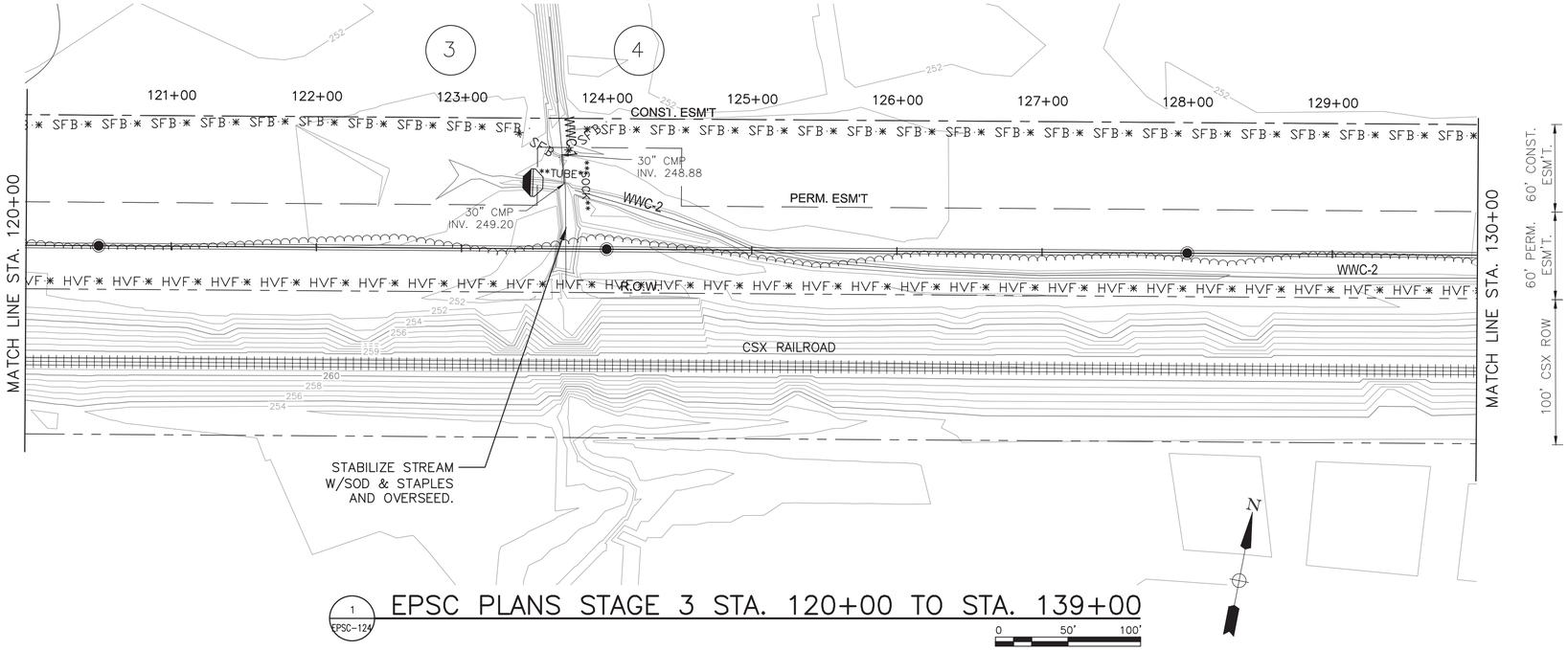
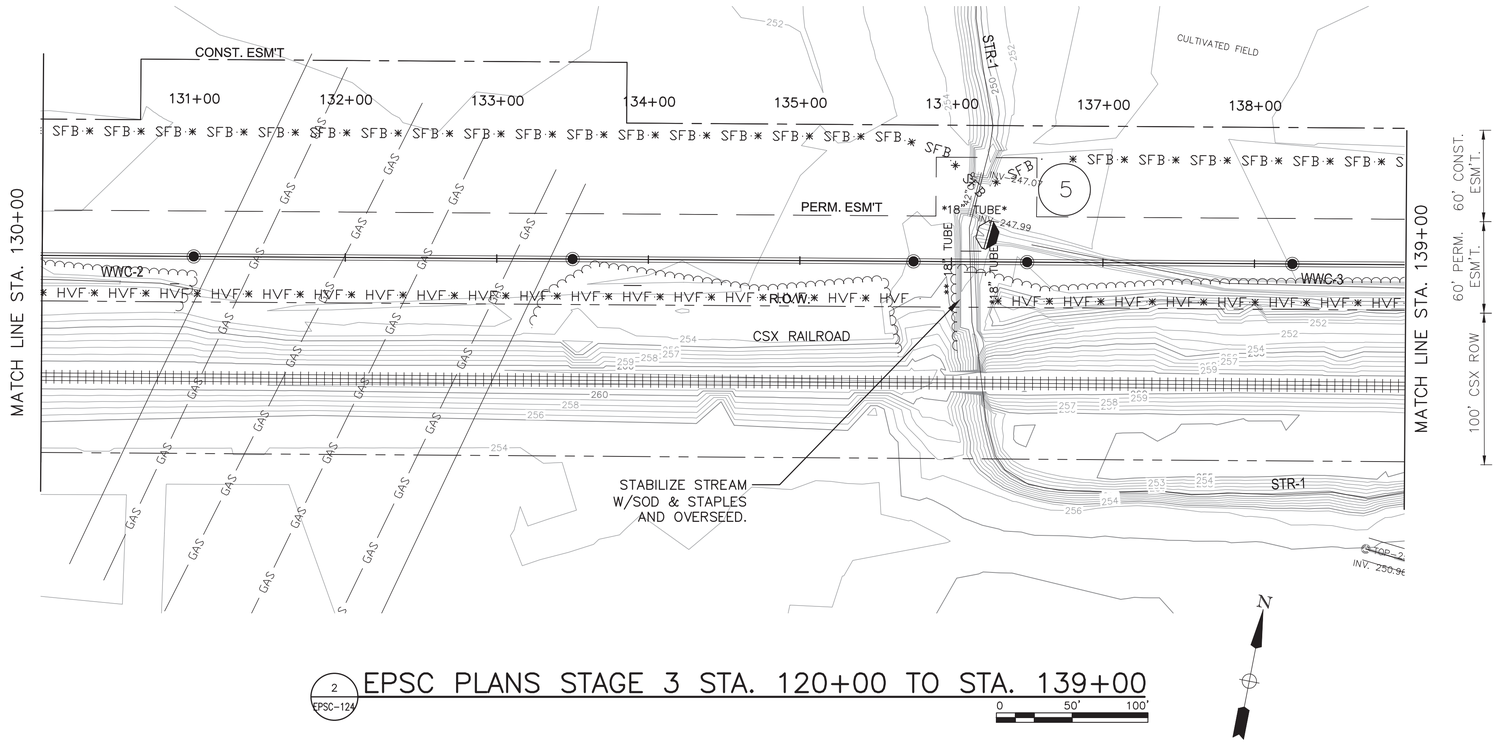
SEE DWG. C-103



1 EPSC-124 EPSC PLANS STAGE 3 STA. 120+00 TO STA. 139+00

0 50' 100'

SEE DWG. C-104



2 EPSC-124 EPSC PLANS STAGE 3 STA. 120+00 TO STA. 139+00

0 50' 100'

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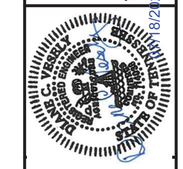


CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-124.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

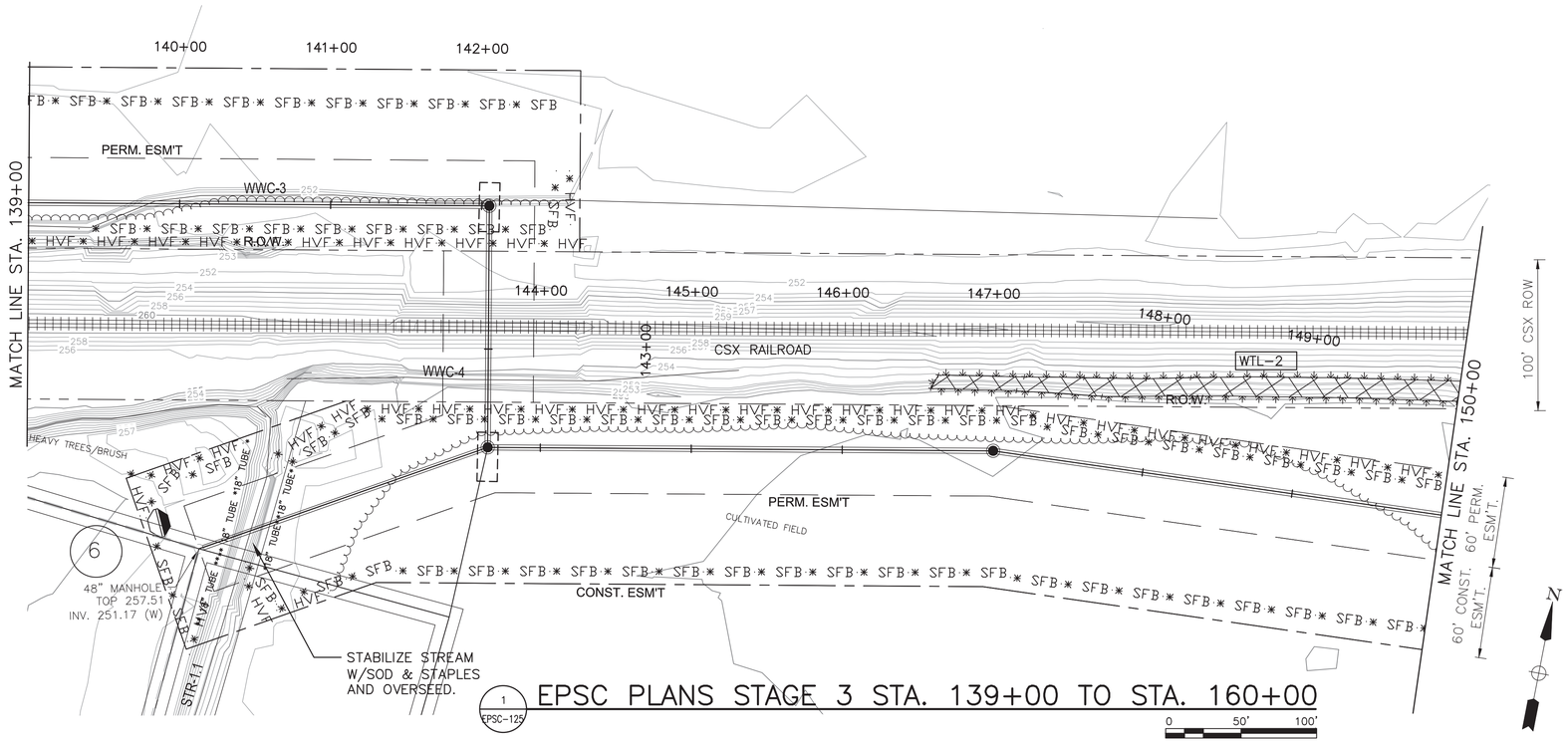
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 3
STA. 120+00
TO
STA. 139+00

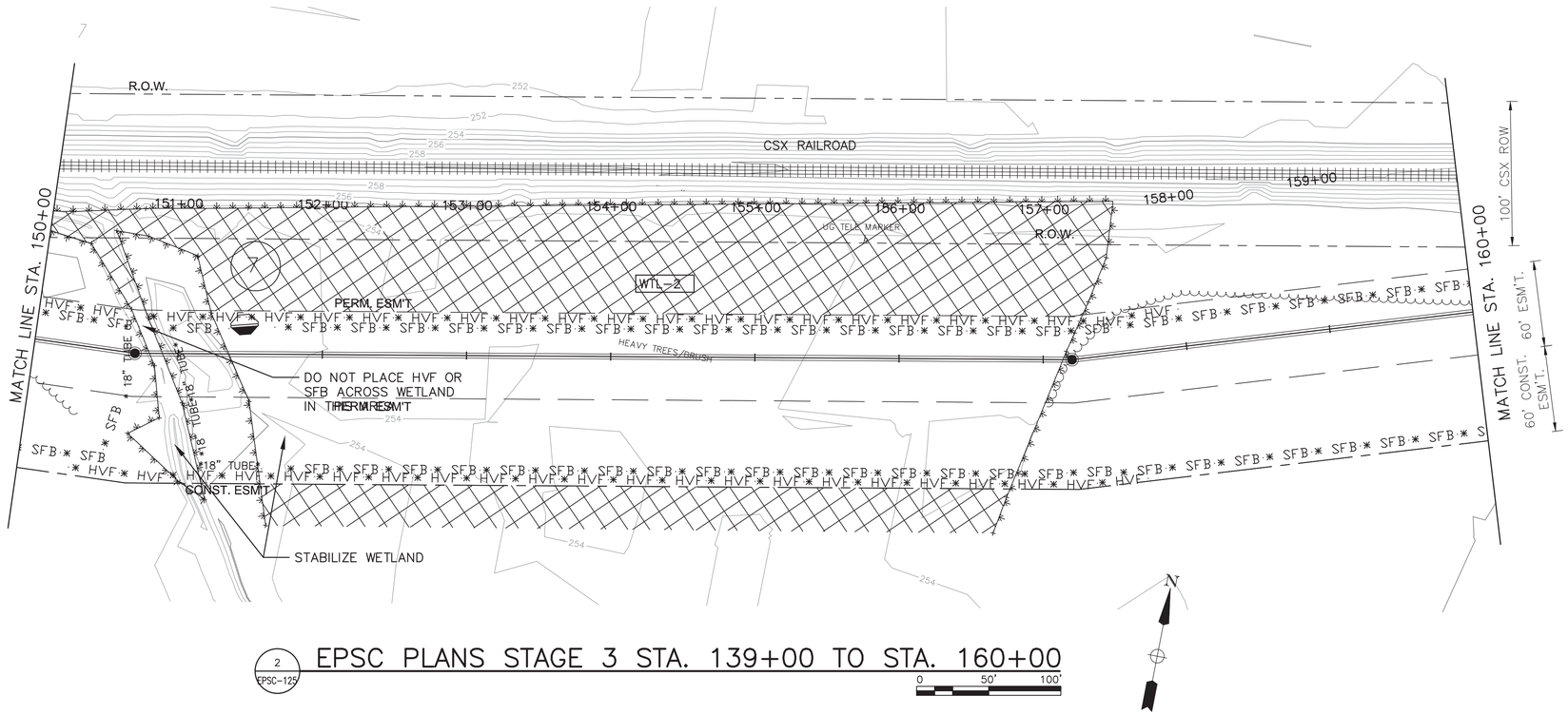
DRAWING NO.
EPSC-124

SHEET 67 OF 87

SEE DWG. C-105



SEE DWG. C-106



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DANIEL C. VESOLY — LICENSED PROFESSIONAL ENGINEER — STATE OF FLORIDA — 78102 — 7/8/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-125.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

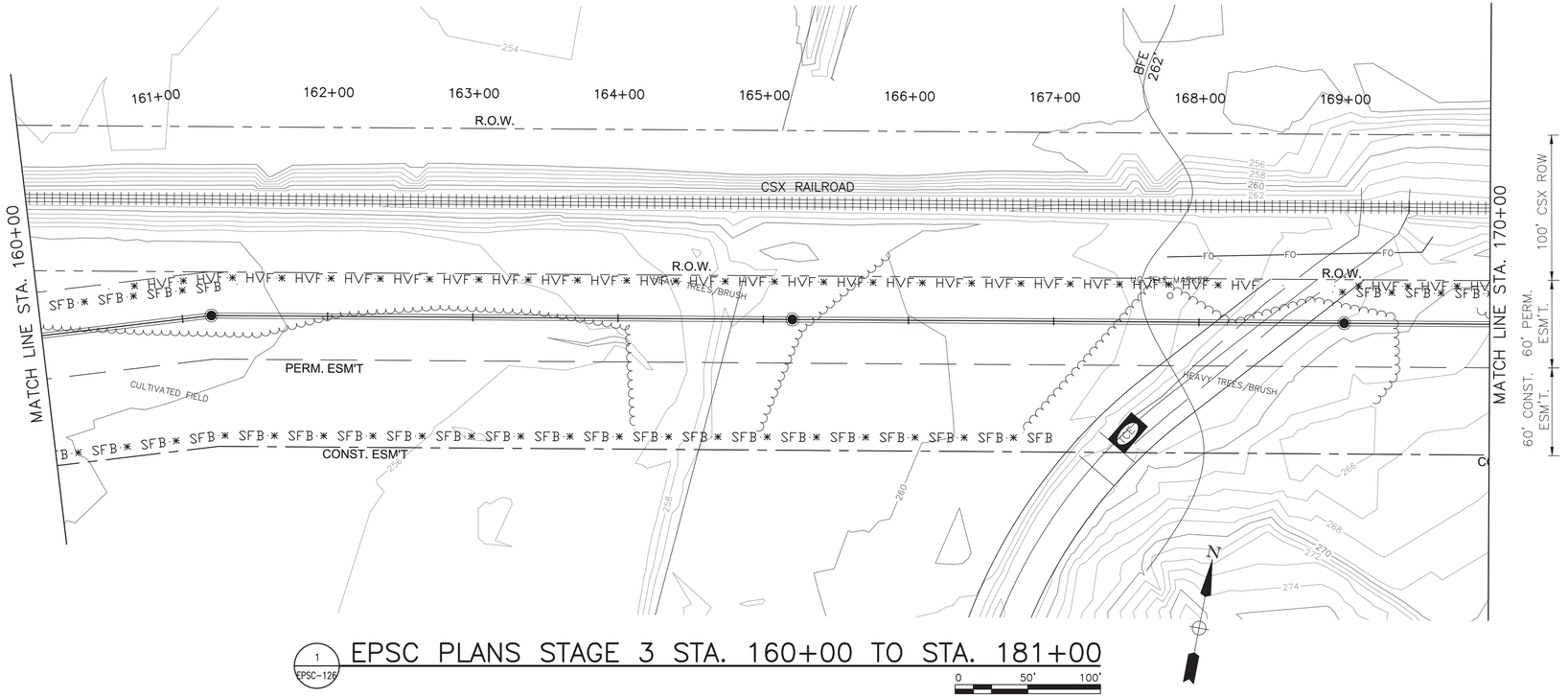
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN STAGE 3 STA. 139+00 TO STA. 160+00

DRAWING NO. EPSC-125

SHEET 68 OF 87

SEE DWG. C-107

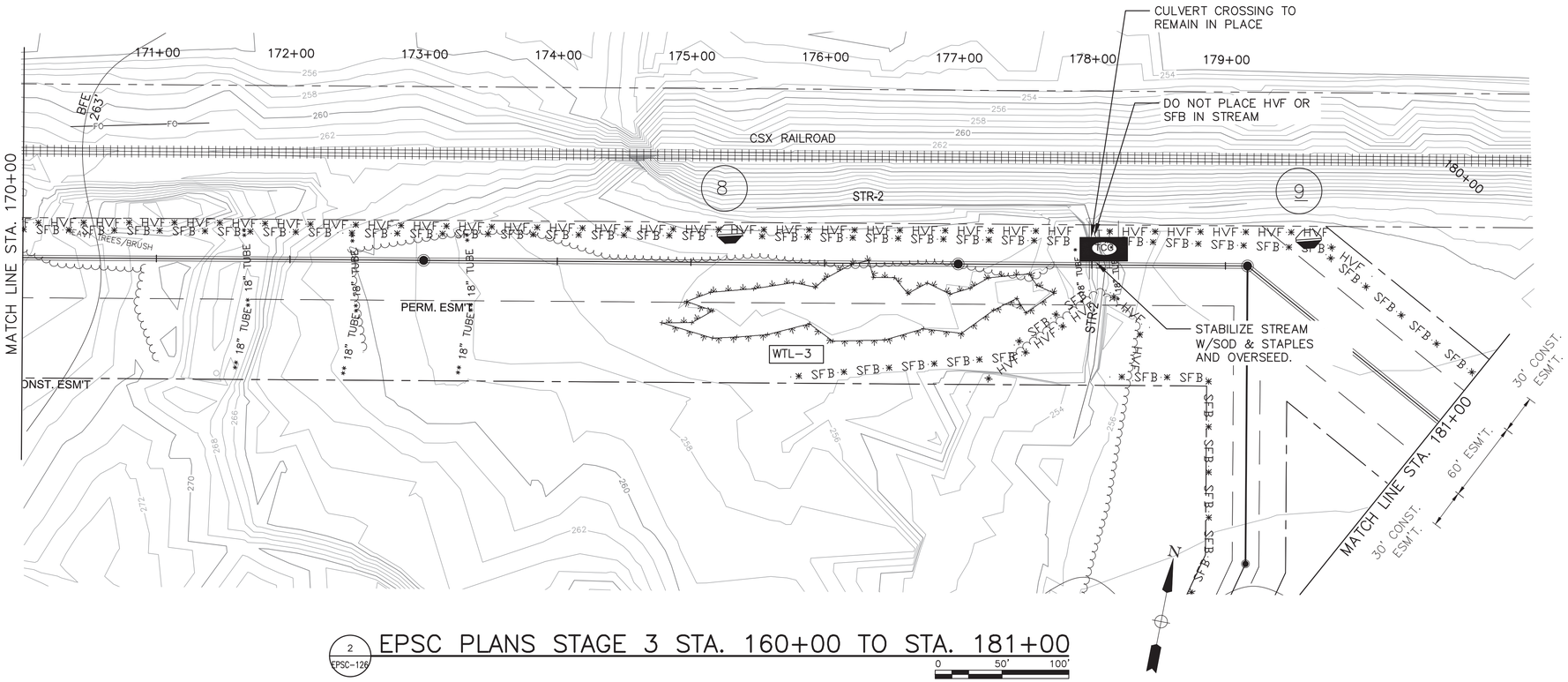


1 EPSC-126

EPSC PLANS STAGE 3 STA. 160+00 TO STA. 181+00

0 50' 100'

SEE DWG. C-108



2 EPSC-126

EPSC PLANS STAGE 3 STA. 160+00 TO STA. 181+00

0 50' 100'

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

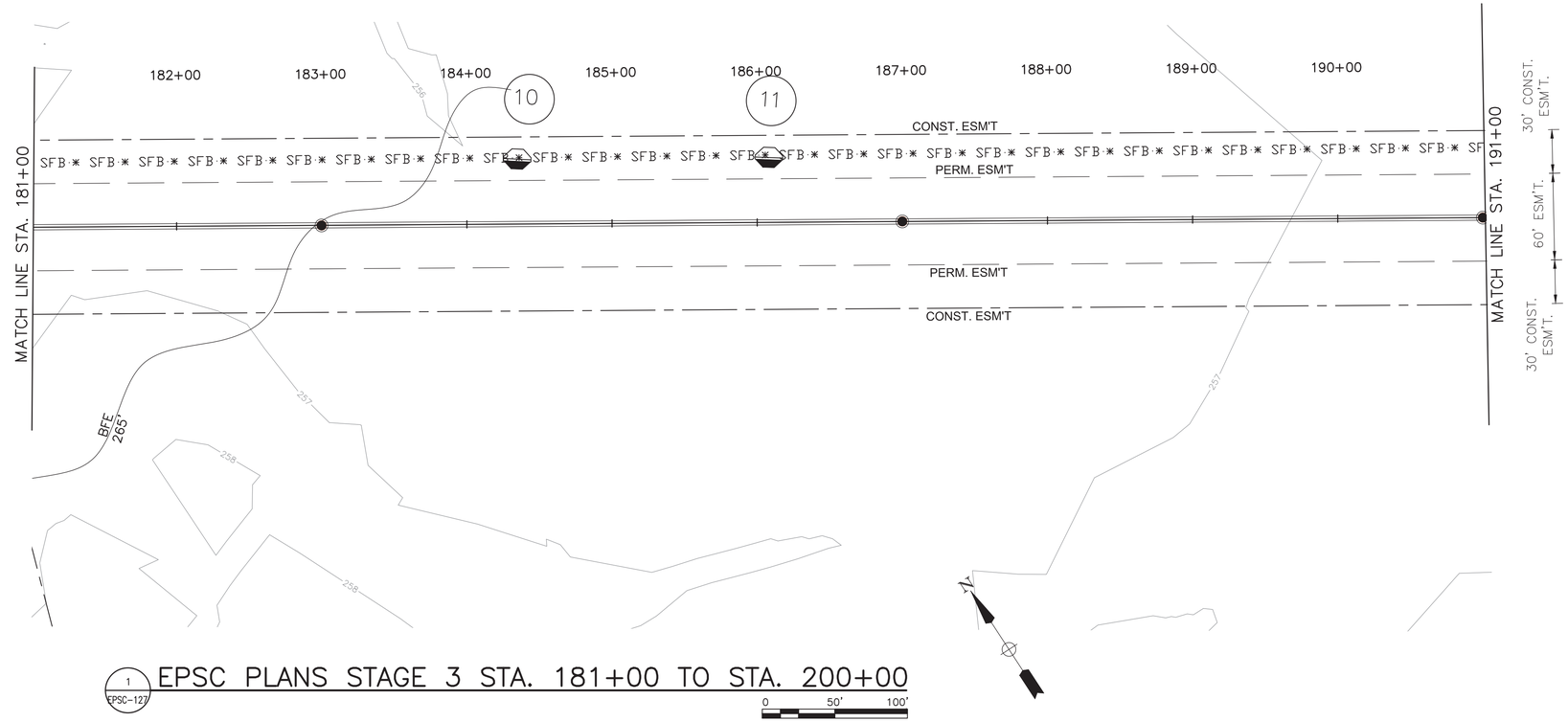
PROJECT NO.:	77202-00
CAD FILE:	EPSC-126.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 3
STA. 160+00
TO
STA. 181+00

DRAWING NO.
EPSC-126

SEE DWG. C-109

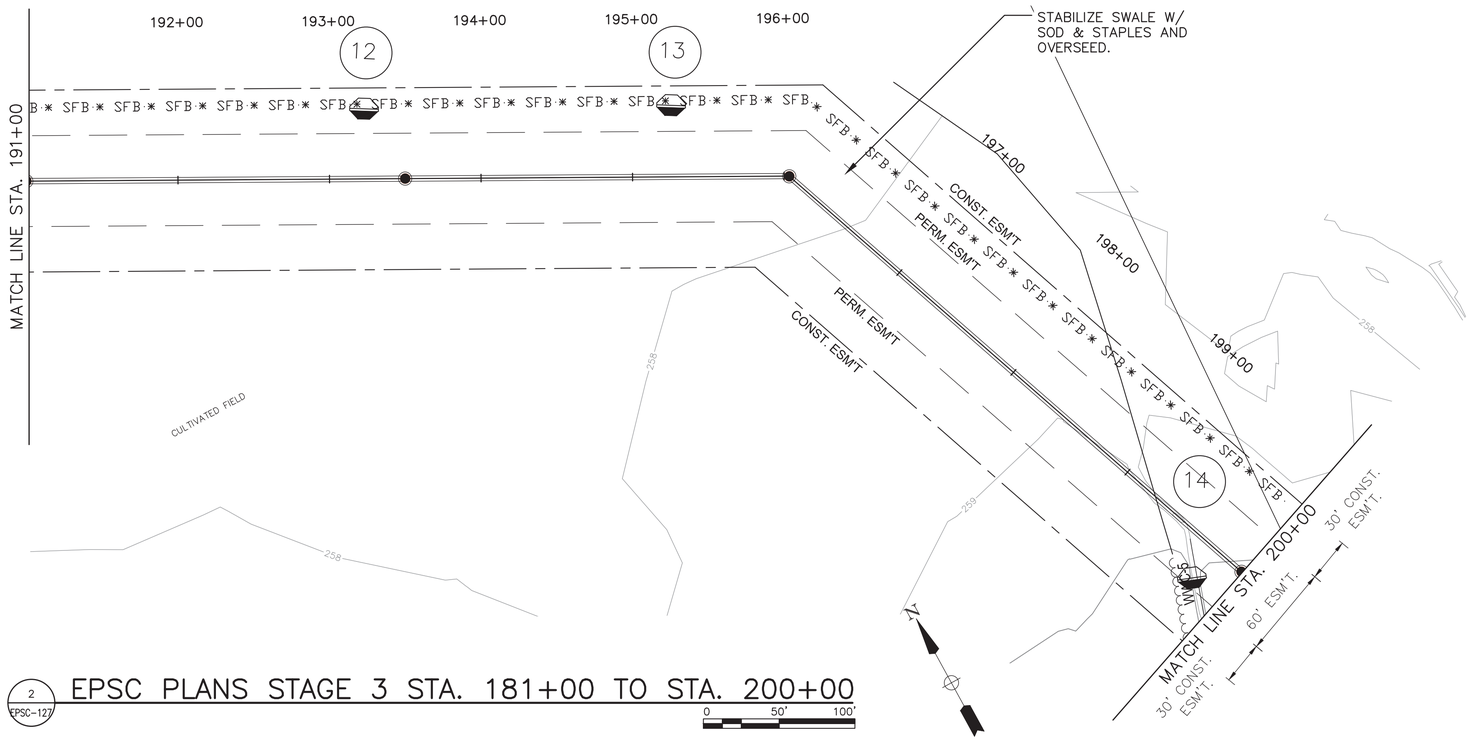


1 EPSC-127

EPSC PLANS STAGE 3 STA. 181+00 TO STA. 200+00

0 50' 100'

SEE DWG. C-110



2 EPSC-127

EPSC PLANS STAGE 3 STA. 181+00 TO STA. 200+00

0 50' 100'

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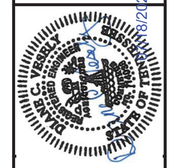

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-127.DWG
ENGR./ARCH.:	DV
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EPSC PLAN
STAGE 3
STA. 181+00
TO
STA. 200+00

DRAWING NO.
EPSC-127

SHEET 70 OF 87

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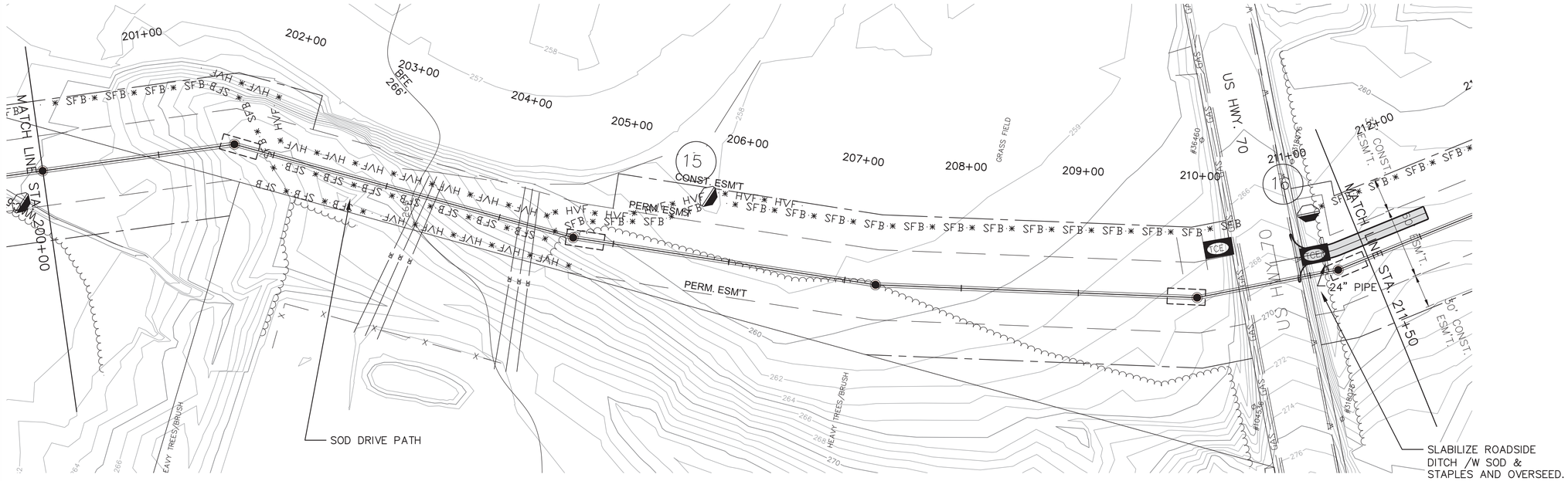
SEE DWG. C-111

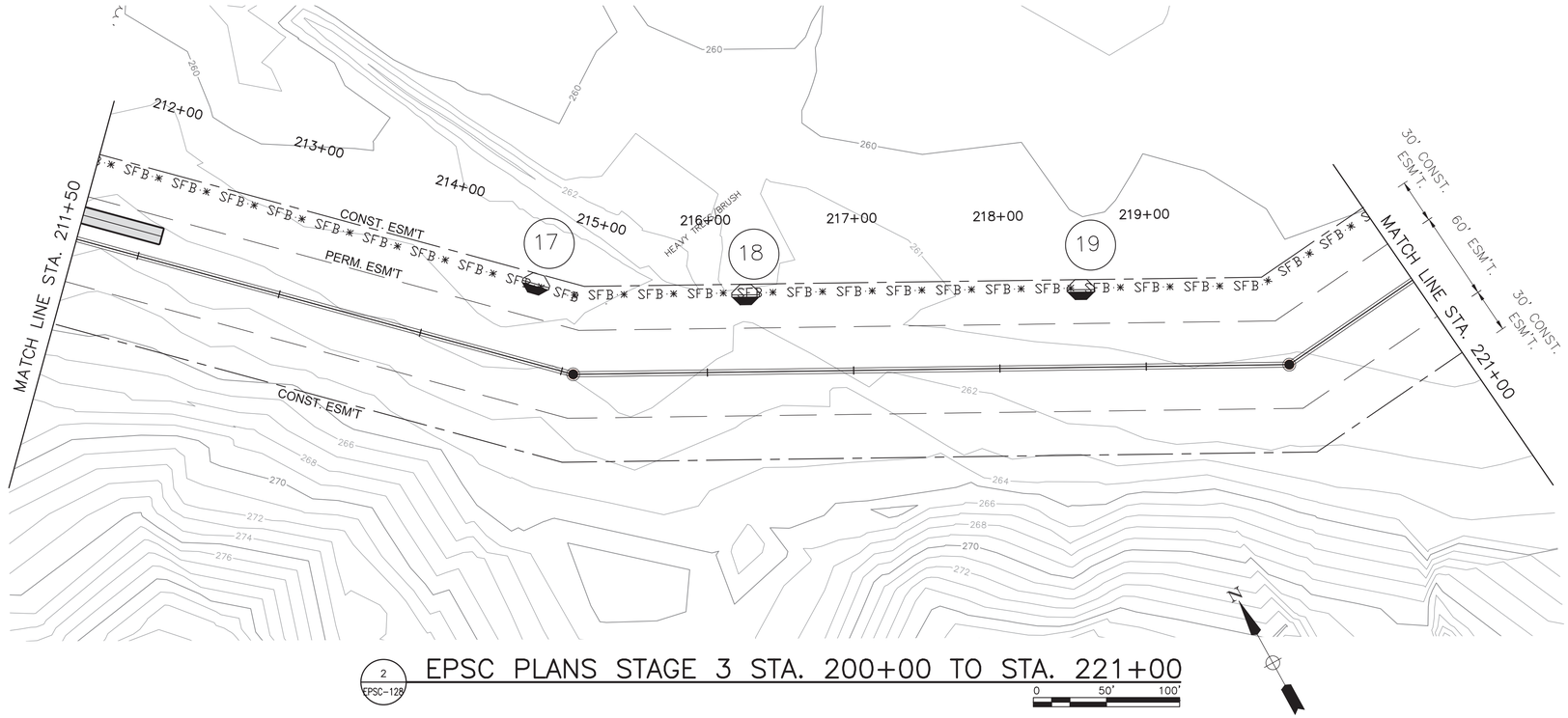


1 EPSC-129

EPSC PLANS STAGE 3 STA. 200+00 TO STA. 221+00

0 50' 100'

SEE DWG. C-112



2 EPSC-128

EPSC PLANS STAGE 3 STA. 200+00 TO STA. 221+00

0 50' 100'

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FLORIDA C. VERDERY ROBERTS 66021 STATE OF FLORIDA REGISTERED ENGINEER
07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-128.DWG
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EPSC PLAN
STAGE 3
STA. 200+00
TO
STA. 221+00

DRAWING NO.
EPSC-128

SHEET 71 OF 87

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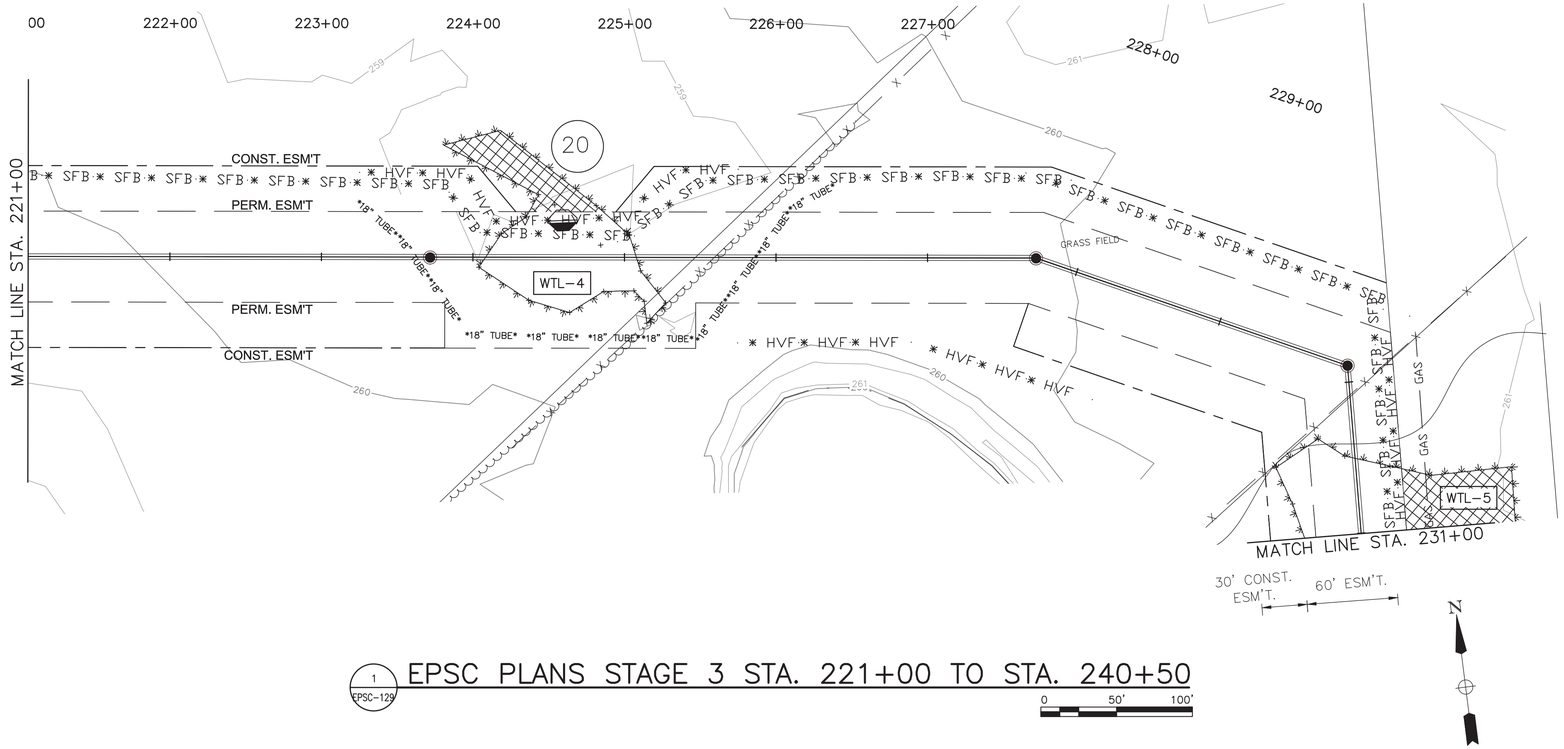
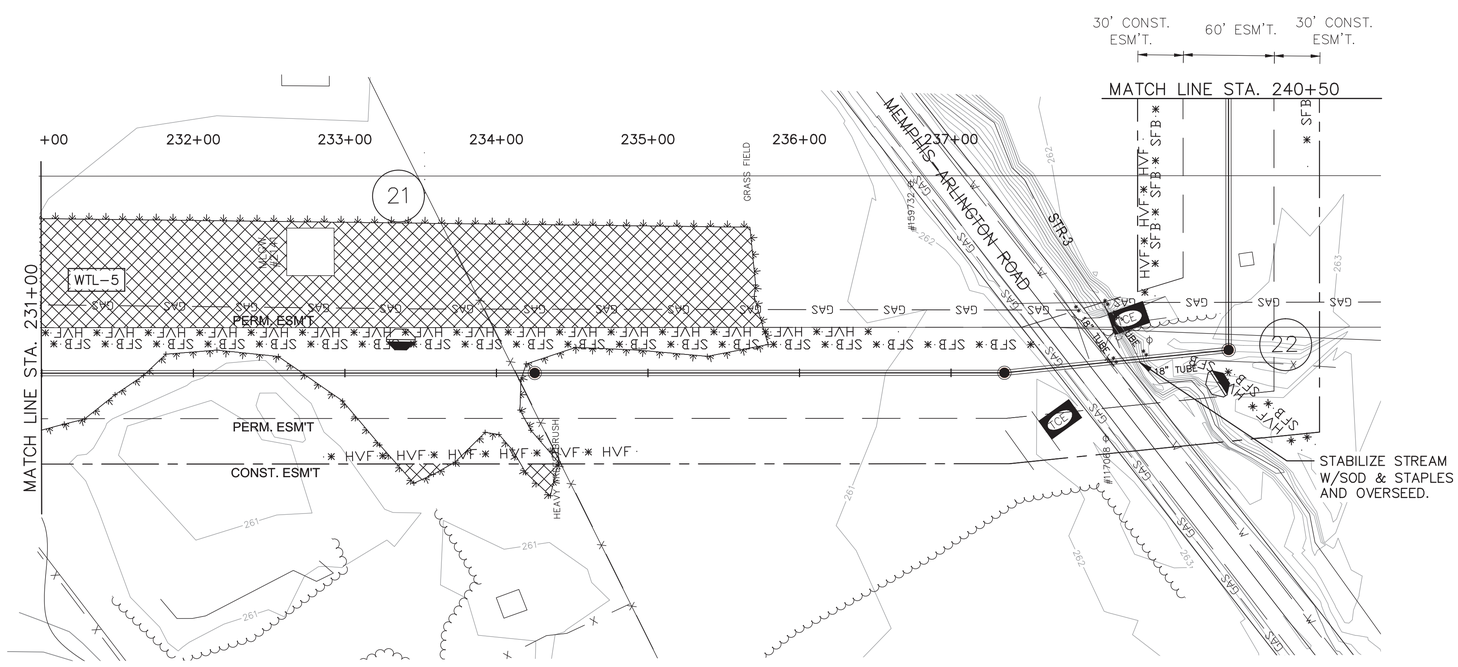
SEE DWG. C-113



1 EPSC-129 EPSC PLANS STAGE 3 STA. 221+00 TO STA. 240+50

0 50' 100'

SEE DWG. C-114



2 EPSC-129 EPSC PLANS STAGE 3 STA. 221+00 TO STA. 240+50

0 50' 100'

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7/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

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DATE:	03/02/2021

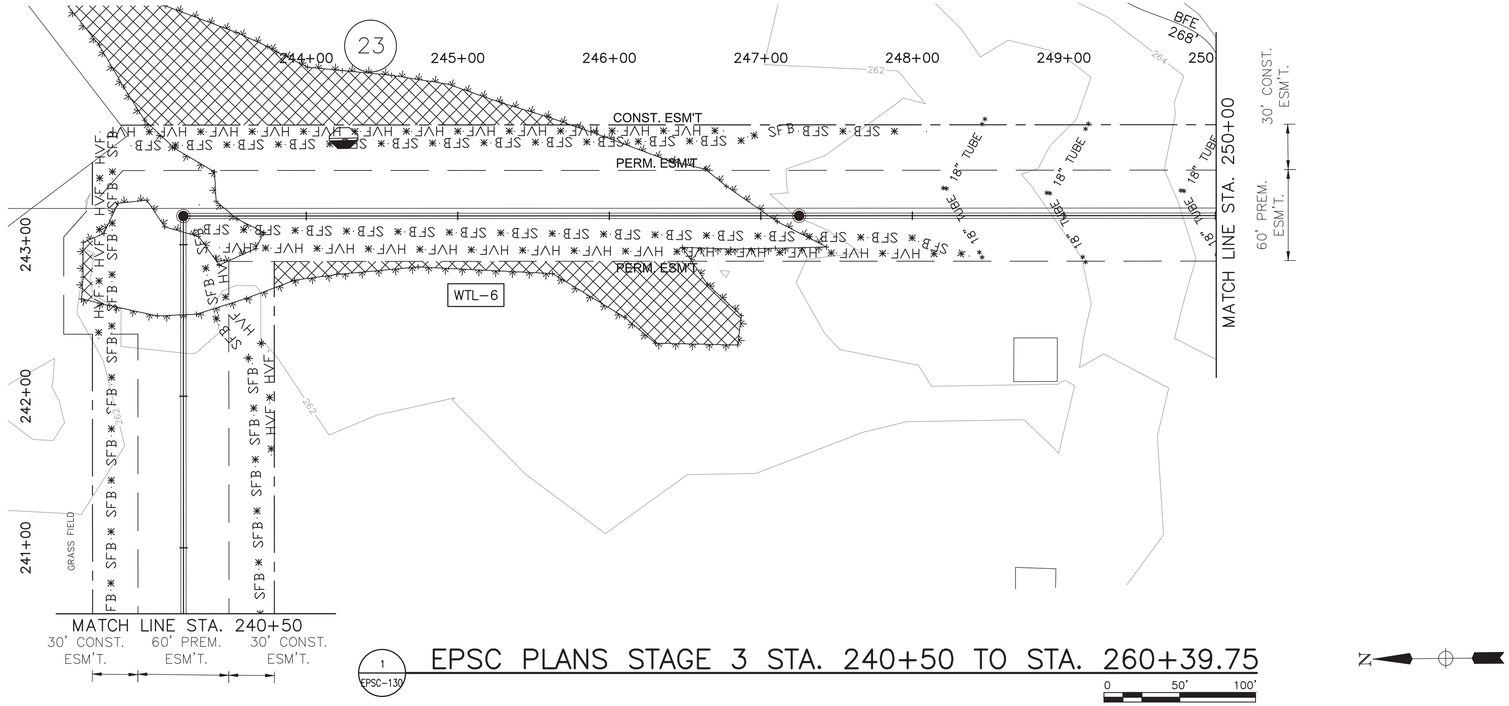
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 3
STA. 221+00
TO
STA. 240+50

DRAWING NO.
EPSC-129

SHEET 72 OF 87

SEE DWG. C-115



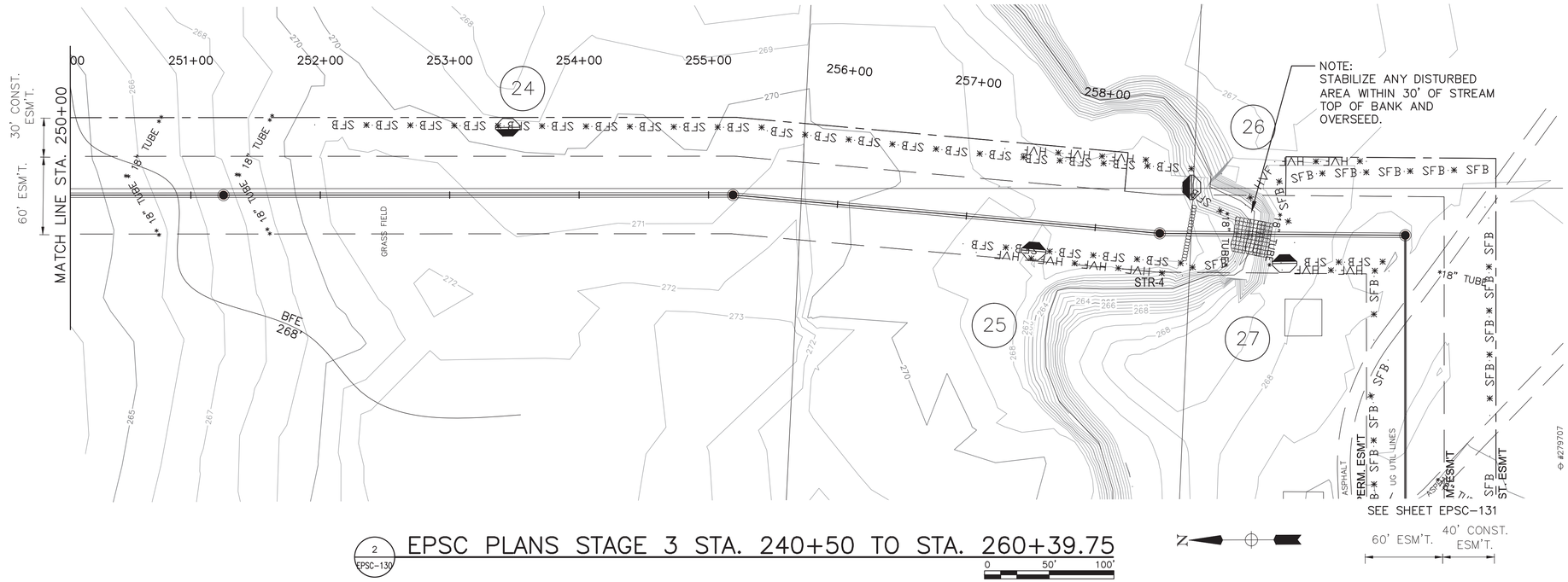
1 EPSC-130

EPSC PLANS STAGE 3 STA. 240+50 TO STA. 260+39.75

0 50' 100'

N

SEE DWG. C-116



2 EPSC-130

EPSC PLANS STAGE 3 STA. 240+50 TO STA. 260+39.75

0 50' 100'

N

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BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

7/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

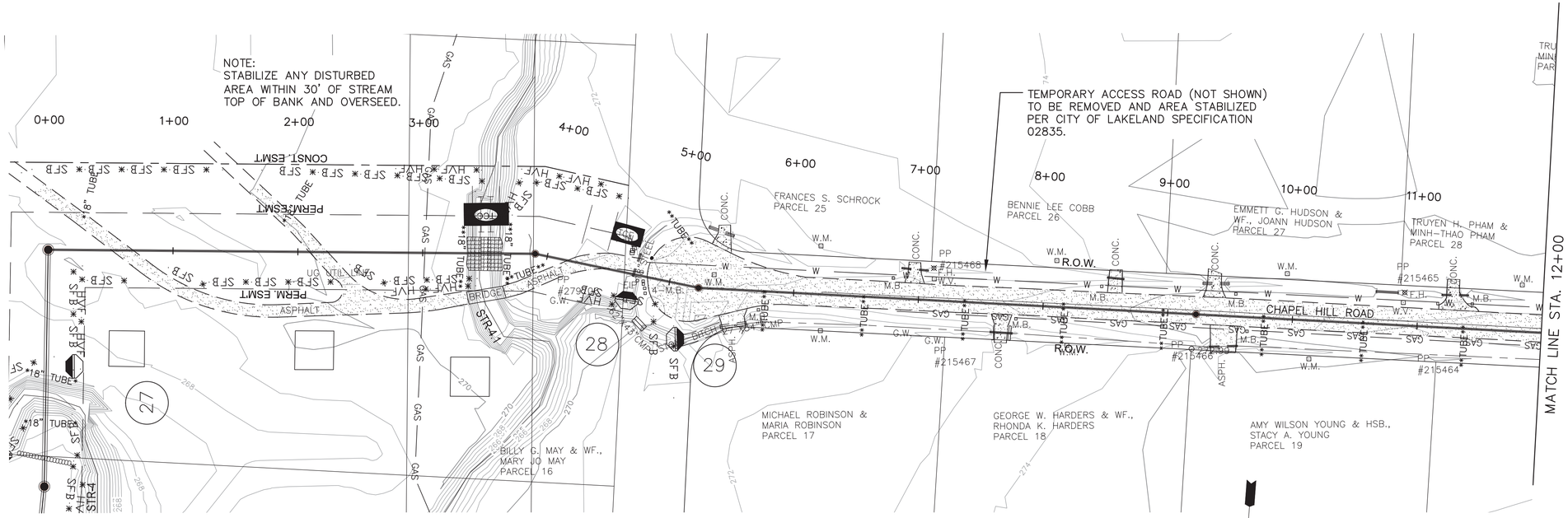
PROJECT NO.:	77202-00
CAD FILE:	EPSC-130.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 3
STA. 250+00
TO
STA. 260+39.75

DRAWING NO.
EPSC-130

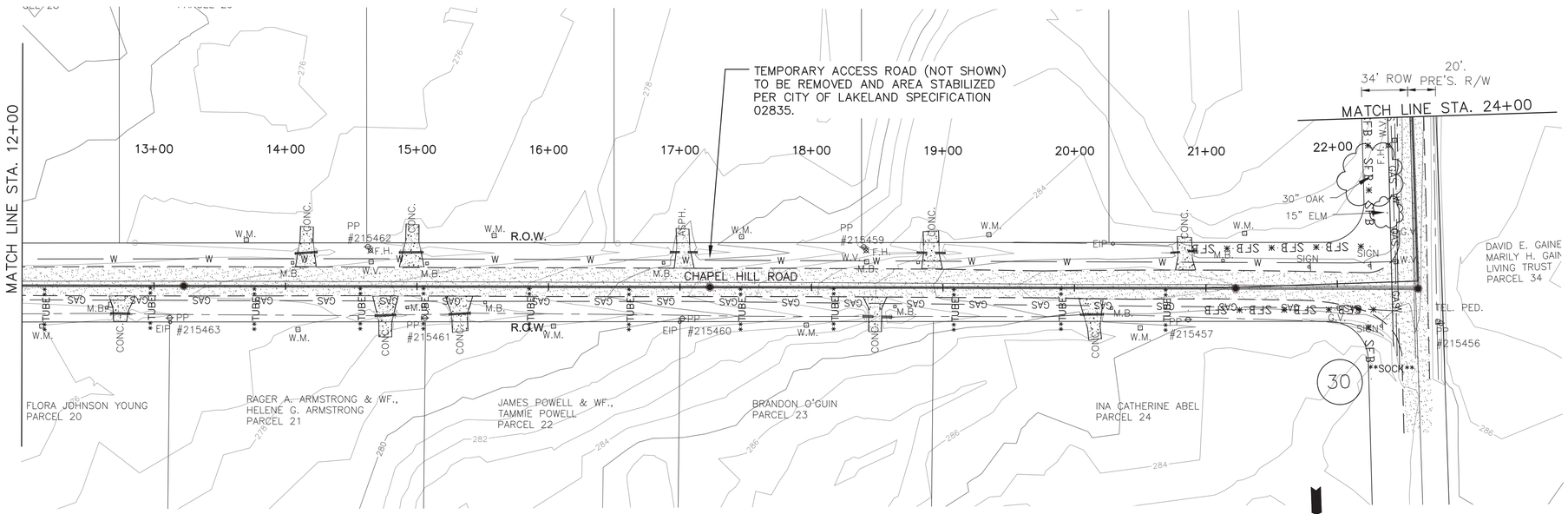
SEE DWG. C-117



1 EPSC-131 EPSC PLANS STAGE 3 18" PIPE STA. 0+00 TO STA. 24+00

0 50' 100'

SEE DWG. C-118



2 EPSC-131 EPSC PLANS STAGE 3 18" PIPE STA. 0+00 TO STA. 24+00

0 50' 100'

BUCHART HORN ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-131.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

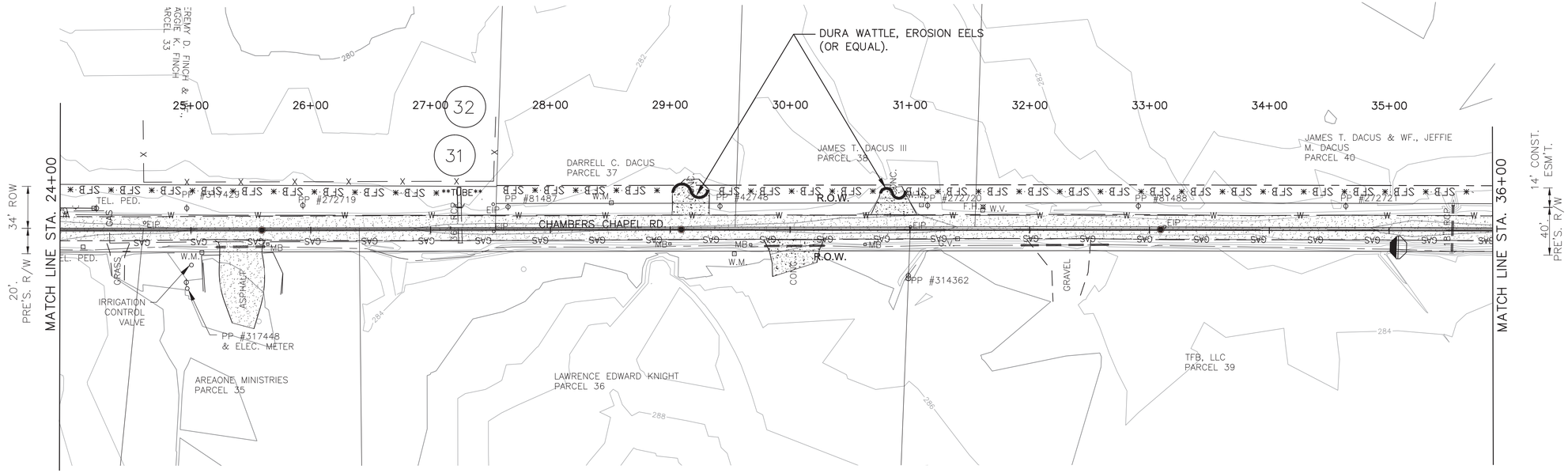
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN STAGE 3 STA. 0+00 TO STA. 24+00

DRAWING NO. EPSC-131

SHEET 74 OF 87

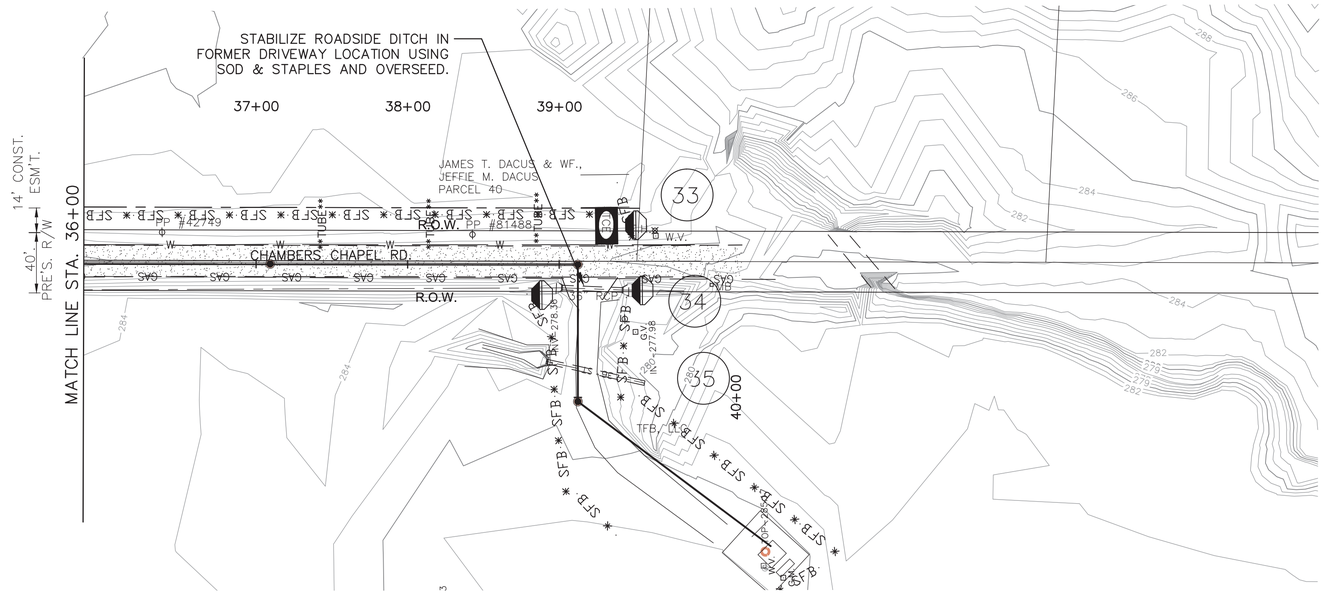
SEE DWG. C-119



1 EPSC-132 EPSC PLANS STAGE 3 18" & 10" PIPE STA. 24+00 TO STA. 39+18.23

0 50' 100'

SEE DWG. C-120



2 EPSC-132 EPSC PLANS STAGE 3 18" & 10" PIPE STA. 24+00 TO STA. 39+18.23

0 50' 100'

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-132.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
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CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 3
STA. 24+00
TO
STA. 39+52.94

DRAWING NO.
EPSC-132

SHEET 75 OF 87

SEE DWG. C-121

1 EPSC-133 EPSC PLANS STAGE 3 10" PIPE STA. 500+00 TO STA. 512+61.24

0 50' 100'

N

BUCHART HORN
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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	EPSC-133.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

EPSC PLAN
STAGE 3
STA. 500+00
TO
STA. 512+61.24

DRAWING NO.
EPSC-133

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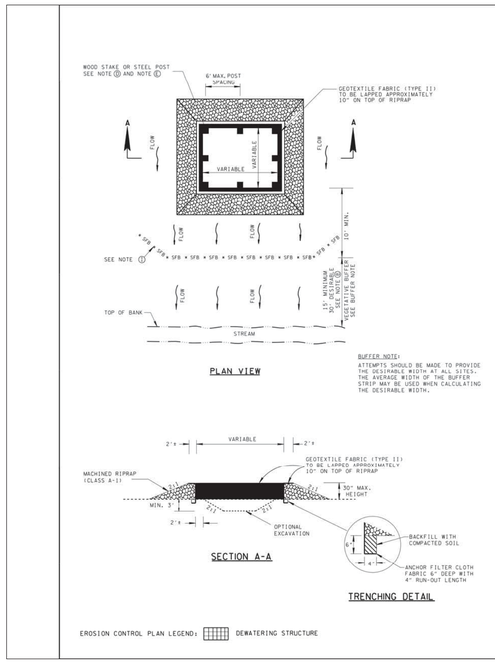


DEWATERING STRUCTURE VOLUMES AND DIMENSIONS				
PUMP DIAMETER (INCHES)	PUMP RATE (GALLONS PER MINUTE)	STORAGE VOLUME REQ'D (CUBIC YARDS)	INTERIOR DIMENSIONS	EXTERIOR DIMENSIONS
2	140	84	30' X 30'	44' X 44'
3	260	155	41' X 41'	55' X 55'
4	500	298	57' X 57'	71' X 71'
6	1,100	654	85' X 85'	99' X 99'

(1) DIMENSIONS BASED ON THE MAXIMUM STRUCTURE HEIGHT OF 30' AND THE LENGTH BEING EQUAL TO THE WIDTH. OPTIONAL EXCAVATION IS NOT INCLUDED.

(2) ADJUSTMENTS SHOULD BE MADE TO THE DIMESIONS TO OBTAIN THE BEST CONFIGURATION FOR THE PROJECT SITE. DIMENSIONS ARE BASED ON THE DEWATERING STRUCTURE BEING HORIZONTAL.

DEWATERING STRUCTURE GENERAL NOTES

(A) DEWATERING STRUCTURES MAY BE USED WHENEVER SEDIMENT LADEN WATER IS REMOVED BY MEANS OF PUMPING. THEY SHOULD BE USED IN CONJUNCTION WITH THE DEWATERING OF COFFERDAMS, TRENCHES, ENCLOSED DITCHES, AND OTHER CONSTRUCTION ACTIVITIES WHICH REQUIRE THE REMOVAL OF SEDIMENT LADEN WATER.

(B) DEWATERING STRUCTURES SHOULD NOT BE PLACED WITHIN A JURISDICTIONAL WETLAND OR WITHIN 15 FEET (30 FEET DESIRABLE) OF A STABILIZED OUTLET, STREAM, OR OTHER NATURAL WATER RESOURCE. WHEN DISCHARGING TO SEDIMENT-IMPAIRED STREAMS OR EXCEPTIONAL TENNESSEE WATERS, THE BUFFER SHALL BE A MINIMUM OF 30 FEET WITH A DESIRABLE WIDTH OF 60 FEET. BUFFER REQUIREMENT DOES NOT APPLY TO ANY LOCATION ON SITE WITH A VALID ARAP OR EQUIVALENT PERMIT BY FEDERAL AGENCIES.

(C) THE MINIMUM STORAGE VOLUME REQUIRED FOR A DEWATERING STRUCTURE SHOULD BE BASED ON 2 HOURS OF PUMPING AT THE RATE SHOWN IN THE "DEWATERING STRUCTURE VOLUMES AND DIMENSIONS" TABLE. THE MINIMUM STORAGE VOLUME REQUIRED IN CUBIC FEET IS OBTAINED BY MULTIPLYING THE PUMPING RATE IN GALLONS PER MINUTE BY 16.

(D) POST SHALL BE PLACED ALONG THE INTERIOR PERIMETER OF THE DEWATERING STRUCTURE. ONE POST SHOULD BE PLACED IN EACH CORNER AND POSTS SHOULD BE PLACED ALONG THE SIDES AT A MAXIMUM SPACING OF 6 FEET. POST SHOULD BE EMBEDDED A MINIMUM OF 30 INCHES INTO THE EXISTING GROUND AND SHOULD EXTEND AT A MINIMUM THE HEIGHT OF THE DEWATERING STRUCTURE.

(E) THE POST SHOULD BE A MINIMUM 2.25" (NOMINAL) X 2.25" (NOMINAL) HARDWOOD POST (OAK OR HICKORY) OR MINIMUM 1.25 LB./FT. STEEL POST (STD. "T" OR "U" SECTION).

(F) DIVERT ANY STORMWATER RUNOFF AWAY FROM THE DEWATERING STRUCTURE.

(G) SEDIMENT FILTER BAGS MAY BE USED TO COLLECT SEDIMENT WHEN PUMPING FROM A DEWATERING STRUCTURE INTO AN ADJACENT STREAM WHEN APPROVED BY THE ENGINEER. SEE STANDARD DRAWING EC-STR-2.

(H) ONLY GEOTEXTILE FABRIC (TYPE II) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(I) INSTALL SILT FENCE WITH WIRE BACKING BETWEEN STREAM AND/OR DRAINAGE DITCH AND THE DEWATERING STRUCTURE. SEE STANDARD DRAWINGS EC-STR-3C AND EC-STR-3E FOR INSTALLATION DETAILS.

(J) THE EXISTING VEGETATIVE BUFFER SHOULD REMAIN BETWEEN SILT FENCE WITH WIRE BACKING AND STABILIZED OUTLET, STREAM OR OTHER NATURAL RESOURCE. BUFFER ZONE EXEMPTIONS ARE DEFINED BASED ON EXISTING LAND USES.

(K) THE VOLUME OF DEWATERING STRUCTURE SHOWN IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS IS TO BE BASED ON USE OF THE 4-INCH PUMP SHOWN IN THE "DEWATERING STRUCTURE VOLUMES AND DIMENSIONS" TABLE.

(L) DEWATERING STRUCTURES SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

203-01 ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC YARD
209-10.01 TEMPORARY DEWATERING STRUCTURE PER CUBIC YARD

SILT FENCE WITH WIRE BACKING SHALL BE PAID FOR ACCORDING TO ITS RESPECTIVE STANDARD DRAWING.

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE DEWATERING STRUCTURE.

(M) THE ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE STRUCTURE IS HALF FULL AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL PER CUBIC YARD.

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-1 TO EC-STR-1.

REV. 10-24-00: IN TEMPORARY DEWATERING STRUCTURE NOTE (L), PAY ITEMS BLOCK CHANGED PAY ITEM NUMBERS AND DESCRIPTIONS TO CONCUR WITH CHANGES MADE BY CONSTRUCTION DIVISION.

REV. 5-27-01: REVISED PAY ITEMS AND GENERAL NOTES TO COMPLY WITH NEW PAY ITEM SYSTEM GOING IN EFFECT OCTOBER 26, 2001.

REV. 12-18-02: ADDED PAY ITEM NOS. 209-08.01 AND 209-08.04. CHANGED SHEET NAME.

REV. 1-22-03: CHANGED GENERAL NOTE Ⓘ.

REV. 4-11-08: REMOVED TEMPORARY REFERENCE, REMOVED PAY ITEMS TABLE, REPLACED GENERAL NOTES AND DEWATERING STRUCTURE VOLUMES TABLE, AND OTHER MINOR DRAFTING EDITS.

REV. 8-1-12: MODIFIED BUFFER DIMENSION, ADDED BUFFER NOTES, MINOR EDITS TO GENERAL NOTES.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

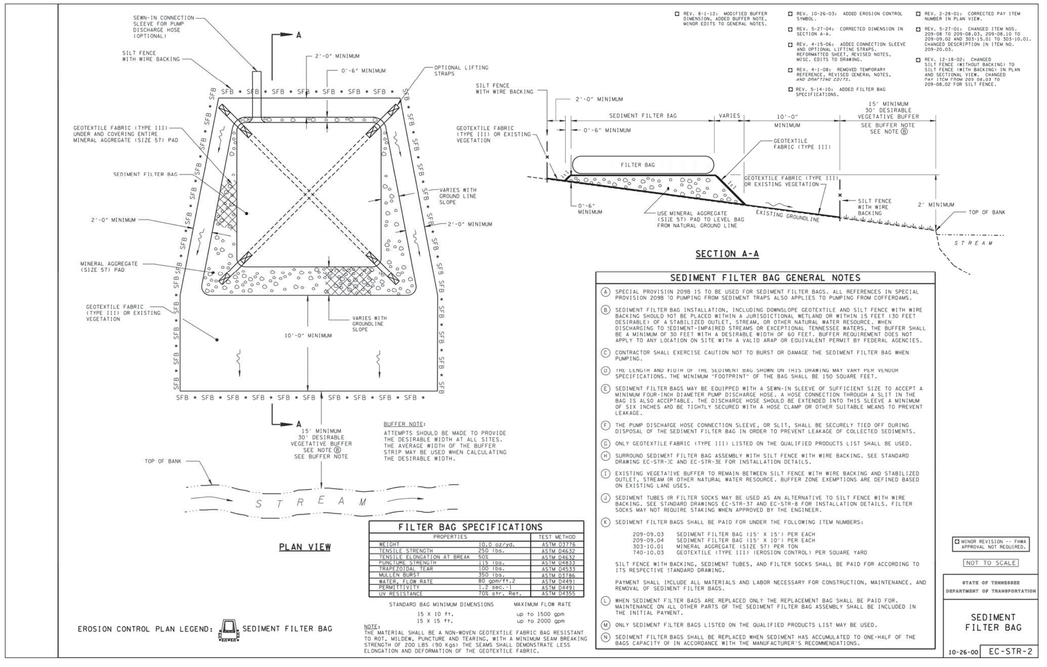
NOT TO SCALE

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

DEWATERING STRUCTURE

10-26-92 EC-STR-1

1 DEWATERING STRUCTURE - EC-STR-1
NOT TO SCALE



REV. 8-1-12: MODIFIED BUFFER DIMENSION, ADDED BUFFER NOTE, MINOR EDITS TO GENERAL NOTES.

REV. 10-24-03: ADDED EROSION CONTROL SYMBOL.

REV. 5-27-04: CORRECTED DIMENSION IN SECTION A-A.

REV. 4-15-06: ADDED CONNECTION SLEEVE AND OPTIONAL LIFTING STRAPS, REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.

REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED GENERAL NOTES, AND ZPAY1160 CHANGE.

REV. 9-14-10: ADDED FILTER BAG SPECIFICATIONS.

REV. 2-28-02: CORRECTED PAY ITEM NUMBER IN PLAN VIEW.

REV. 5-27-01: CHANGED ITEM NOS. 209-08.02 TO 209-08.03, 209-08.10 TO 209-08.02 AND 303-15.01 TO 303-10.01. CHANGED DESCRIPTION IN ITEM NO. 209-20.03.

REV. 12-18-02: CHANGED SILT FENCE (WITHOUT BACKING) TO SILT FENCE (WITH BACKING) IN PLAN AND SECTIONAL VIEW. CHANGED PAY ITEM FROM 209-08.03 TO 209-08.02 FOR SILT FENCE.

SEDIMENT FILTER BAG GENERAL NOTES

(A) SPECIAL PROVISION 209B (S) TO BE USED FOR SEDIMENT FILTER BAGS. ALL REFERENCES IN SPECIAL PROVISION 209B TO PUMPING FROM SEDIMENT TRAPS ALSO APPLIES TO PUMPING FROM COFFERDAMS.

(B) SEDIMENT FILTER BAG INSTALLATION, INCLUDING DOWNSLOPE GEOTEXTILE AND SILT FENCE WITH WIRE BACKING SHOULD NOT BE PLACED WITHIN A JURISDICTIONAL WETLAND OR WITHIN 15 FEET (30 FEET DESIRABLE) OF A STABILIZED OUTLET, STREAM, OR OTHER NATURAL WATER RESOURCE. WHEN DISCHARGING TO SEDIMENT-IMPAIRED STREAMS OR EXCEPTIONAL TENNESSEE WATERS, THE BUFFER SHALL BE A MINIMUM OF 30 FEET WITH A DESIRABLE WIDTH OF 60 FEET. BUFFER REQUIREMENT DOES NOT APPLY TO ANY LOCATION ON SITE WITH A VALID ARAP OR EQUIVALENT PERMIT BY FEDERAL AGENCIES.

(C) CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE SEDIMENT FILTER BAG WHEN PUMPING.

(D) THE LENGTH AND WIDTH OF THE SEDIMENT BAG SHOWN ON THIS DRAWING MAY VARY PER MANUFACTURER SPECIFICATIONS, THE MINIMUM "FOOTPRINT" OF THE BAG SHALL BE 150 SQUARE FEET.

(E) SEDIMENT FILTER BAGS MAY BE EQUIPPED WITH A SEWN-IN SLEEVE OF SUFFICIENT SIZE TO ACCEPT A MINIMUM FOUR-INCH DIAMETER PUMP DISCHARGE HOSE. A HOSE CONNECTION THROUGH A SLIT IN THE BAG IS ALSO ACCEPTABLE. THE DISCHARGE HOSE SHOULD BE EXTENDED INTO THIS SLEEVE A MINIMUM OF SIX INCHES AND BE TIGHTLY SECURED WITH A HOSE CLAMP OR OTHER SUITABLE MEANS TO PREVENT LEAKAGE.

(F) THE PUMP DISCHARGE HOSE CONNECTION SLEEVE, OR SLIT, SHALL BE SECURELY TIED OFF DURING DISPOSAL OF THE SEDIMENT FILTER BAG IN ORDER TO PREVENT LEAKAGE OF COLLECTED SEDIMENTS.

(G) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(H) SURROUND SEDIMENT FILTER BAG ASSEMBLY WITH SILT FENCE WITH WIRE BACKING. SEE STANDARD DRAWING EC-STR-2C AND EC-STR-3E FOR INSTALLATION DETAILS.

(I) EXISTING VEGETATIVE BUFFER TO REMAIN BETWEEN SILT FENCE WITH WIRE BACKING AND STABILIZED OUTLET, STREAM OR OTHER NATURAL WATER RESOURCE. BUFFER ZONE EXEMPTIONS ARE DEFINED BASED ON EXISTING LAND USES.

(J) SEDIMENT TUBES OR FILTER SOCKS MAY BE USED AS AN ALTERNATIVE TO SILT FENCE WITH WIRE BACKING. SEE STANDARD DRAWINGS EC-STR-3T AND EC-STR-3K FOR INSTALLATION DETAILS. FILTER SOCKS MAY NOT REQUIRE STAKING WHEN APPROVED BY THE ENGINEER.

(K) SEDIMENT FILTER BAGS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

209-09.03 SEDIMENT FILTER BAG (15' X 15') PER EACH
209-09.04 SEDIMENT FILTER BAG (25' X 10') PER EACH
209-09.05 SEDIMENT FILTER BAG (OTHER) PER EACH
740-10.03 GEOTEXTILE (TYPE III) (EROSION CONTROL) PER SQUARE YARD

SILT FENCE WITH WIRE BACKING, SEDIMENT TUBES, AND FILTER SOCKS SHALL BE PAID FOR ACCORDING TO ITS RESPECTIVE STANDARD DRAWING.

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF SEDIMENT FILTER BAGS.

(L) WHEN SEDIMENT FILTER BAGS ARE REPLACED ONLY THE REPLACEMENT BAG SHALL BE PAID FOR. MAINTENANCE ON ALL OTHER PARTS OF THE SEDIMENT FILTER BAG ASSEMBLY SHALL BE INCLUDED IN THE INITIAL PAYMENT.

(M) ONLY SEDIMENT FILTER BAGS LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED.

(N) SEDIMENT FILTER BAGS SHALL BE REPLACED WHEN SEDIMENT HAS ACCUMULATED TO ONE-HALF OF THE BAGS CAPACITY OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

FILTER BAG SPECIFICATIONS

PROPERTIES	TEST METHOD
WEIGHT 10.0 oz/yd²	ASTM D3776
TENSILE STRENGTH 200 lbs.	ASTM D4632
TENSILE ELONGATION AT BREAK 50%	ASTM D4632
PUNCTURE STRENGTH 115 lbs.	ASTM D4833
TRAPEZOIDAL TEAR 100 lbs.	ASTM D4533
MULLEN BURST 300 psi	ASTM D3786
WATER FLOW RATE 80 gpm/ft²/min	ASTM D4491
APPARENT OPENING SIZE 70 US sieve	ASTM D4751
UV RESISTANCE 70% STR. RET.	ASTM D4355

STANDARD BAG MINIMUM DIMENSIONS: 15 X 10 Ft., 15 X 15 Ft.

MAXIMUM FLOW RATE: up to 1500 gpm, up to 2000 gpm

NOTE: THE MATERIAL SHALL BE A NON-WOVEN GEOTEXTILE FABRIC BAG RESISTANT TO ROT, MILDEW, PUNCTURE AND TEARING, WITH A MINIMUM SEAM BREAKING STRENGTH OF 200 LBS (90 Kgs). THE SEAMS SHALL DEMONSTRATE LESS ELONGATION AND DEFORMATION OF THE GEOTEXTILE FABRIC.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

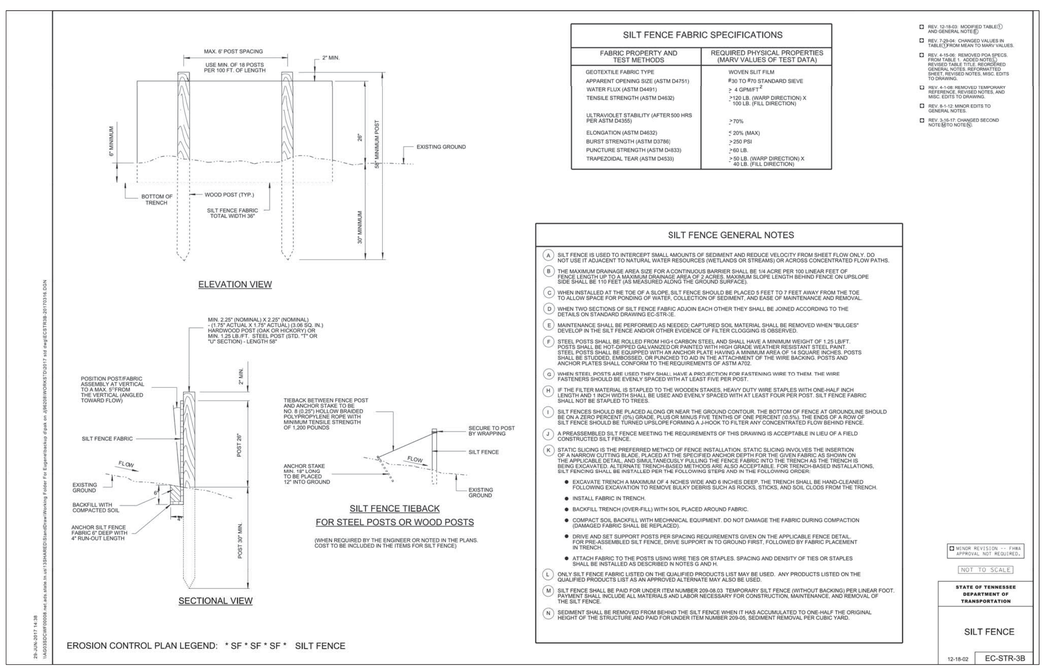
NOT TO SCALE

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

SEDIMENT FILTER BAG

10-26-00 EC-STR-2

2 SEDIMENT FILTER BAG - EC-STR-2
NOT TO SCALE



SILT FENCE FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MARV VALUES OF TEST DATA)
GEOTEXTILE FABRIC TYPE	WOVEN SLIT FILM
APPARENT OPENING SIZE (ASTM D4751)	#30 TO #70 STANDARD SIEVE
WATER FLUX (ASTM D4491)	> .4 GPM/FT²
TENSILE STRENGTH (ASTM D4632)	>120 LB. (WARP DIRECTION) X 100 LB. (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	>70%
ELONGATION (ASTM D4632)	< 20% (MAX)
BURST STRENGTH (ASTM D3786)	>250 PSI
PUNCTURE STRENGTH (ASTM D4833)	>60 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	>50 LB. (WARP DIRECTION) X 40 LB. (FILL DIRECTION)

REV. 12-18-03: MODIFIED TABLE (1) AND GENERAL NOTE (E)

REV. 7-29-04: CHANGED VALUES IN TABLE 2 FROM MEAN TO MARV VALUES.

REV. 4-15-06: REMOVED POA SPECS. FROM TABLE 1, ADDED NOTE (1), REVISED TABLE TITLE, REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.

REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED NOTES, AND MISC. EDITS TO DRAWING.

REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

REV. 5-16-17: CHANGED SECOND NOTE(S) TO NOTE(S).

SILT FENCE GENERAL NOTES

(A) SILT FENCE IS USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. DO NOT USE IT ADJACENT TO NATURAL WATER RESOURCES (WETLANDS OR STREAMS) OR ACROSS CONCENTRATED FLOW PATHS.

(B) THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE 1/4 ACRE PER 100 LINEAR FEET OF FENCE LENGTH UP TO A MAXIMUM DRAINAGE AREA OF 2 ACRES. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 110 FEET (AS MEASURED ALONG THE GROUND SURFACE).

(C) WHEN INSTALLED AT THE TOE OF A SLOPE, SILT FENCE SHOULD BE PLACED 5 FEET TO 7 FEET AWAY FROM THE TOE TO ALLOW SPACE FOR PONDING OF WATER, COLLECTION OF SEDIMENT, AND EASE OF MAINTENANCE AND REMOVAL.

(D) WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.

(E) MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR OTHER EVIDENCE OF FILTER CLOGGING IS OBSERVED.

(F) STEEL POSTS SHALL BE ROLLED FROM HIGH CARBON STEEL AND SHALL HAVE A MINIMUM WEIGHT OF 1.25 LB/FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH GRADE WEATHER RESISTANT STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH AN ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF THE WIRE BACKING. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702.

(G) WHEN STEEL POSTS ARE USED THEY SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST FIVE PER POST.

(H) IF THE FILTER MATERIAL IS STAPLED TO THE WOODEN STAKES, HEAVY DUTY WIRE STAPLES WITH ONE-HALF INCH LENGTH AND 1 INCH WIDTH SHALL BE USED AND EVENLY SPACED WITH AT LEAST FOUR PER POST. SILT FENCE FABRIC SHALL NOT BE STAPLED TO TREES.

(I) SILT FENCES SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF FENCE AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (0.5%). THE ENDS OF A ROW OF FENCING SHOULD BE TURNED UPSLOPE FORMING A J-HOOK TO FILTER ANY CONCENTRATED FLOW BEHIND FENCE.

(J) A PREASSEMBLED SILT FENCE MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED SILT FENCE.

(K) STATIC SLICING IS THE PREFERRED METHOD OF FENCE INSTALLATION. STATIC SLICING INVOLVES THE INSERTION OF A NARROW CUTTING BLADE, PLACED AT THE SPECIFIED ANCHOR DEPTH FOR THE GIVEN FABRIC AS SHOWN ON THIS DRAWING, INTO THE GROUND. A TRENCH IS NOT CUT. THE FABRIC IS ATTACHED TO THE BACK SIDE OF THE SLICING BLADE AND PULLED INTO PLACE. ALTERNATE TRENCH-BASED METHODS ARE ALSO ACCEPTABLE. FOR TRENCH-BASED INSTALLATIONS, SILT FENCING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:

- EXCAVATE TRENCH A MAXIMUM OF 4 INCHES WIDE AND 6 INCHES DEEP. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
- INSTALL FABRIC IN TRENCH.
- BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
- COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
- DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL. FOR PRE-ASSEMBLED SILT FENCE, DRIVE SUPPORT IN TO GROUND FIRST, FOLLOWED BY FABRIC PLACEMENT IN TRENCH.
- ATTACH FABRIC TO THE POSTS USING WIRE TIES OR STAPLES. SPACING AND DENSITY OF TIES OR STAPLES SHALL BE INSTALLED AS DESCRIBED IN NOTES G AND H.

(L) ONLY SILT FENCE FABRIC LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED. ANY PRODUCTS LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE MAY ALSO BE USED.

(M) SILT FENCE SHALL BE PAID FOR UNDER ITEM NUMBER 209-08.03 "TEMPORARY SILT FENCE (WITHOUT BACKING) PER LINEAR FOOT. PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE SILT FENCE.

(N) SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL PER CUBIC YARD.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

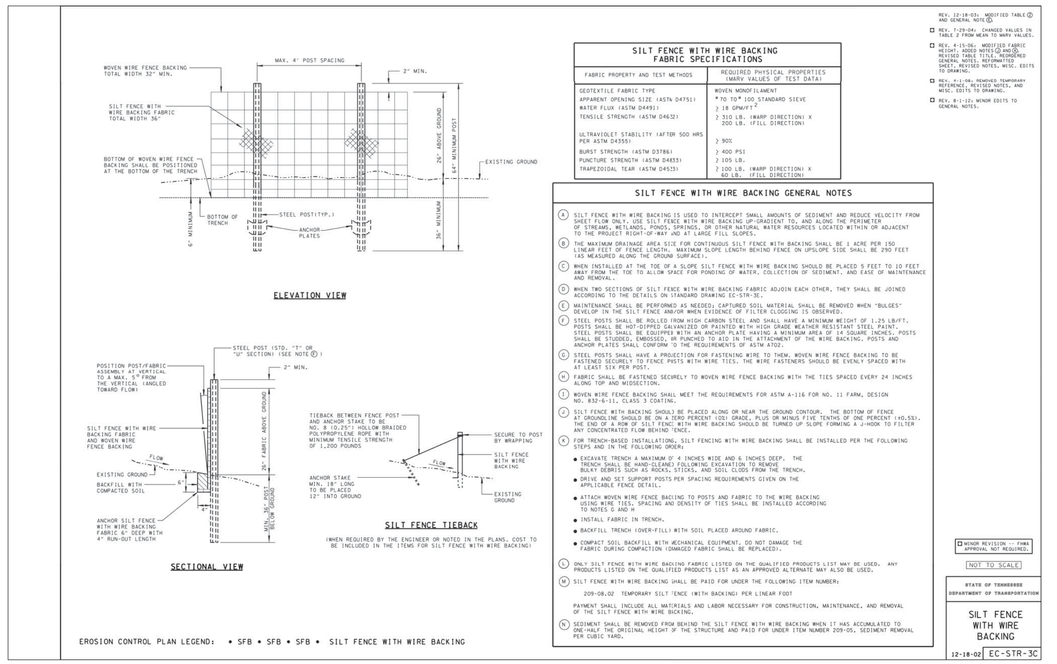
NOT TO SCALE

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

SILT FENCE

12-18-02 EC-STR-3B

3 SILT FENCE - EC-STR-3B
NOT TO SCALE



SILT FENCE WITH WIRE BACKING FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MARV VALUES OF TEST DATA)
GEOTEXTILE FABRIC TYPE	WOVEN MONOFILAMENT
APPARENT OPENING SIZE (ASTM D4751)	* TO TO* 100 STANDARD SIEVE
WATER FLUX (ASTM D4491)	) 18 GPM/FT²
TENSILE STRENGTH (ASTM D4632)	) 310 LB. (WARP DIRECTION) X 200 LB. (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	) 90%
BURST STRENGTH (ASTM D3786)	) 400 PSI
PUNCTURE STRENGTH (ASTM D4833)	) 105 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	) 100 LB. (WARP DIRECTION) X 60 LB. (FILL DIRECTION)

REV. 12-18-03: MODIFIED TABLE (2) AND GENERAL NOTE (E)

REV. 7-29-04: CHANGED VALUES IN TABLE 2 FROM MEAN TO MARV VALUES.

REV. 4-15-06: MODIFIED FABRIC HEIGHT, ADDED NOTES (2) AND (3), REVISED TABLE TITLE, REFORMATTED GENERAL NOTES, REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.

REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED NOTES, AND MISC. EDITS TO DRAWING.

REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

SILT FENCE WITH WIRE BACKING GENERAL NOTES

(A) SILT FENCE WITH WIRE BACKING IS USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. USE SILT FENCE WITH WIRE BACKING UP-GRADIENT TO, AND ALONG THE PERIMETER OF STREAMS, WETLANDS, PONDS, SPRINGS, OR OTHER NATURAL WATER RESOURCES LOCATED WITHIN OR ADJACENT TO THE PROJECT RIGHT-OF-WAY AND AT LARGE FILL SLOPES.

(B) THE MAXIMUM DRAINAGE AREA SIZE FOR CONTINUOUS SILT FENCE WITH BACKING SHALL BE 1 ACRE PER 150 LINEAR FEET OF FENCE LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 290 FEET (AS MEASURED ALONG THE GROUND SURFACE).

(C) WHEN INSTALLED AT THE TOE OF A SLOPE SILT FENCE WITH WIRE BACKING SHOULD BE PLACED 5 FEET TO 10 FEET AWAY FROM THE TOE TO ALLOW SPACE FOR PONDING OF WATER, COLLECTION OF SEDIMENT, AND EASE OF MAINTENANCE AND REMOVAL.

(D) WHEN TWO SECTIONS OF SILT FENCE WITH WIRE BACKING FABRIC ADJOIN EACH OTHER, THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.

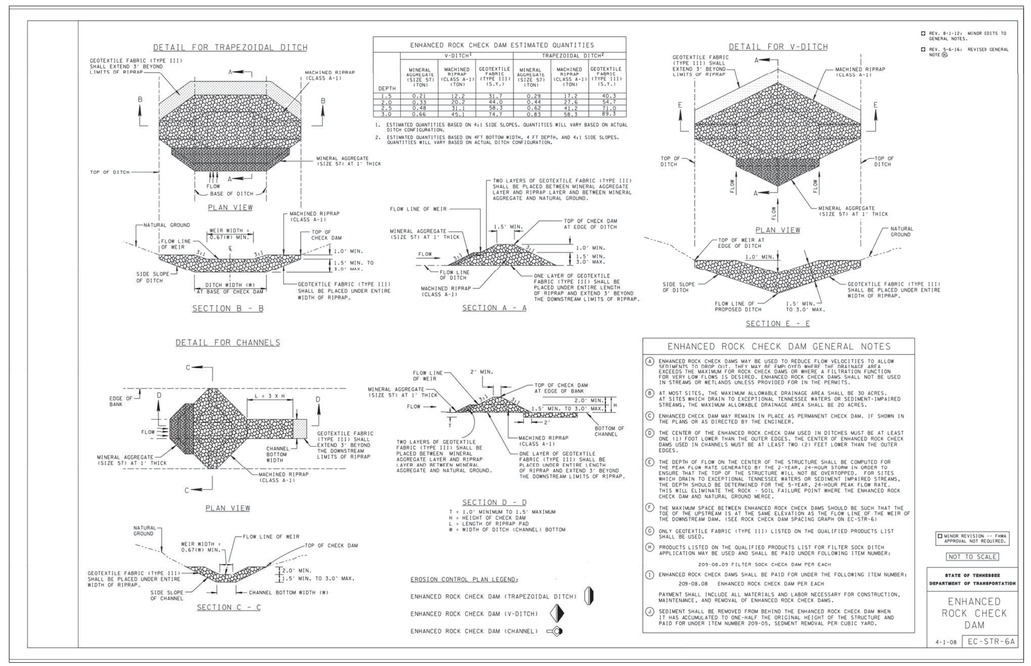
(E) MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR WHEN EVIDENCE OF FILTER CLOGGING IS OBSERVED.

(F) STEEL POSTS SHALL BE ROLLED FROM HIGH CARBON STEEL AND SHALL HAVE A MINIMUM WEIGHT OF 1.25 LB/FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH GRADE WEATHER RESISTANT STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH AN ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF THE WIRE BACKING. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702.

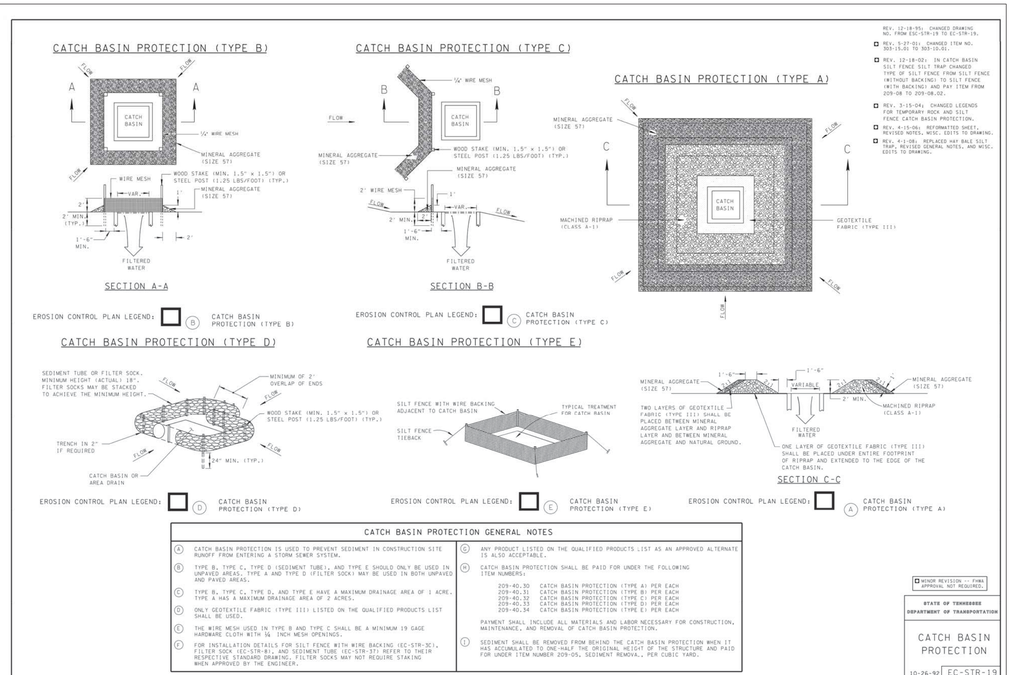
(G) STEEL POSTS SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. WOVEN WIRE FENCE BACKING TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST SIX PER POST.

(H) FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH THE TIES SPACED EVERY 24 INCHES ALONG TOP AND MIDSECTION.

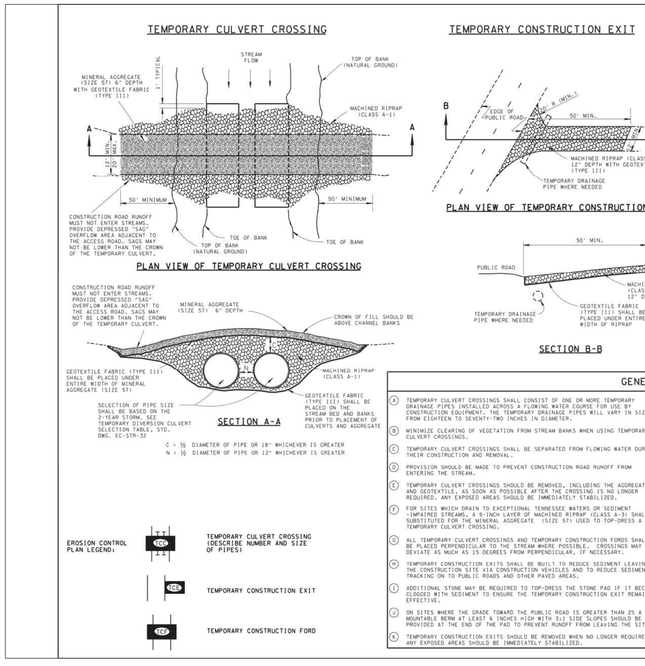
(I) WOVEN WIRE FENCE BACKING SHALL MEET THE REQUIREM



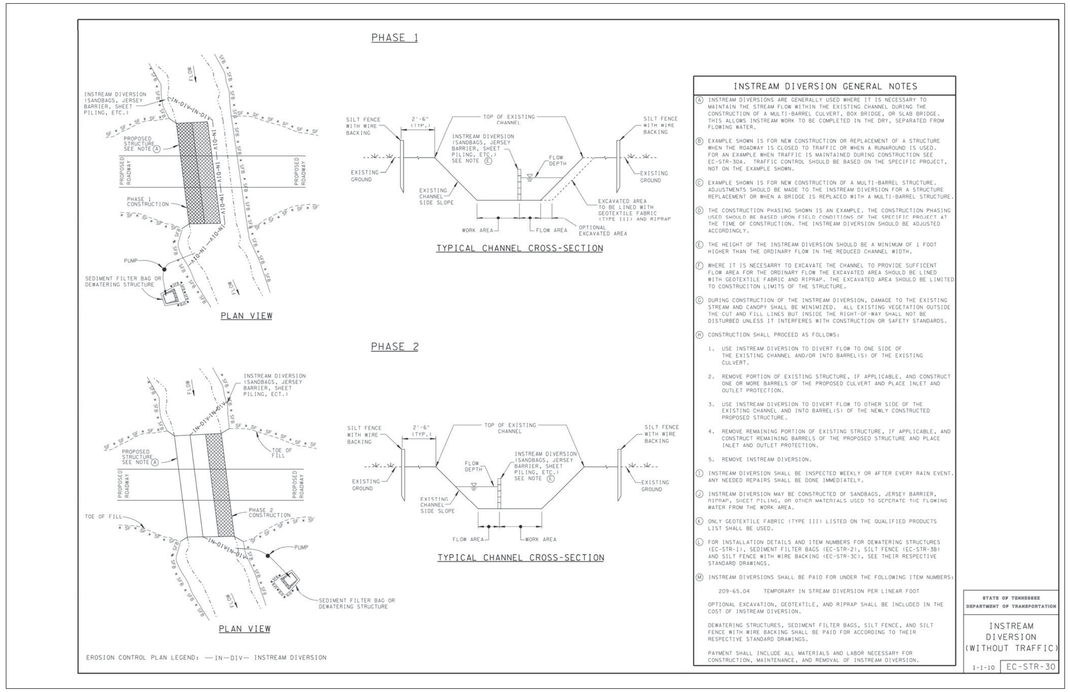
5 ENHANCED ROCK CHECK DAM - EC-STR-6A
NOT TO SCALE



6 CATCH BASIN PROTECTION - EC-STR-19
NOT TO SCALE



1 TEMPORARY CULVERT CROSSING - EC-STR-25
NOT TO SCALE



2 INSTREAM DIVERSION - EC-STR-30
NOT TO SCALE

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

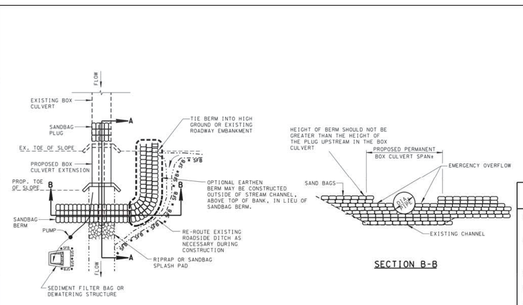
NO.	REVISION	BY	DATE

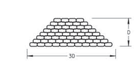
PROJECT NO.: 77202-00
CAD FILE: EPSC-502.DWG
ENGR./ARCH.: DV
DESIGN BY: DV
DRAWN BY: DB
CHECKED BY: DV
DATE: 03/02/2021

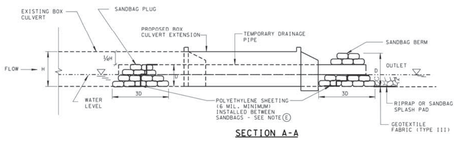
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

STANDARD DETAILS

DRAWING NO. EPSC-502
SHEET 78 OF 87







EROSION CONTROL PLAN LEGEND: SUSPENDED PIPE DIVERSION

MAXIMUM SPAN FOR PIPE SUPPORTS, FEET

DIAMETER OF PIPE (IN.)	STEEL THICKNESS (IN.)				
	0.064	0.079	0.109	0.138	0.168
	2" X ½" CORRUGATION				
24	13	15	20		
36	12	15	20	25	
48	11	14	19	25	30
60		14	19	24	29
72			18	24	29
	5" X 1" OR 3" X 1" CORRUGATION				
36	9	11			
48	9	11	15		
60	8	10	14	18	
72	8	10	14	18	22

FOR PIPE SIZES NOT SHOWN REFER TO NEXT LARGER SIZE

SOURCE: HANDBOOK OF STEEL DRAINAGE AND HIGHWAY CONSTRUCTION PRODUCTS, 1994, P. 278

SUSPENDED PIPE DIVERSION (DOWNSTREAM) GENERAL NOTES

(A) SUSPENDED PIPE DIVERSIONS MAY BE USED TO ALLOW BOX CULVERT EXTENSIONS TO BE CONSTRUCTED, WHILE SEPARATED FROM FLOWING WATER, THUS REDUCING SEDIMENTATION. OPTIONAL FLEXIBLE PIPE DIVERSION MAY BE UTILIZED ON STREAMS WITH INTERMITTENT FLOW WHERE THE DURATION OF CONSTRUCTION IS EXPECTED TO BE BRIEF.

(B) SUSPENDED PIPE DIVERSIONS SHALL BE DESIGNED USING A 2-YEAR STORM FREQUENCY FLOW RATE, AT SITES WHICH INVOLVE EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE PIPE SHALL BE ADEQUATE TO CONVEY THE 5-YEAR, PEAK FLOW. THE TABLE "TEMPORARY DIVERSION CULVERT SELECTION" ON STANDARD DRAWING EC-STR-32 MAY BE USED AS A GUIDELINE FOR DETERMINING THE PIPE SIZE. FOR ANY SITE WHERE Dsp EXCEEDS 500 CFS, THE DESIGN OF THIS MEASURE SHOULD BE COMPLETED BY THE HYDRAULICS SECTION OF THE STRUCTURES DIVISION.

(C) SUSPENDED PIPE DIVERSIONS MAY BE USED WHERE ADVERSE IMPACTS WILL NOT BE CAUSED BY WATER PONDED UPSTREAM OF THE PIPE.

(D) THE SANDBAG PLUG AT THE UPSTREAM END OF THE SUSPENDED PIPE DIVERSION SHOULD BE CONSTRUCTED TO A HEIGHT EQUAL TO THREE QUARTERS OF THE RISE OF THE BOX CULVERT.

(E) POLYETHYLENE SHEETING (6 MIL. MINIMUM) SHALL BE PLACED INSIDE THE SANDBAG PLUG IN THE BOX CULVERT AND IN THE SAND BAG BERM WITHIN THE CHANNEL IN ORDER TO PROVIDE THE BEST POSSIBLE SEAL. SANDBAGS ON THE DOWNSTREAM SIDE OF THE SHEETING SHOULD BE PLACED FIRST, AND THEN SHEETING PLACED ON THESE BAGS. AS MUCH AS POSSIBLE, THE SHEETING SHOULD BE FITTED AROUND THE PIPE. THE REMAINING SANDBAGS WOULD THEN BE PLACED ON THE SHEETING. WHERE MULTIPLE SHEETS ARE USED, THEY SHOULD OVERLAP A MINIMUM OF 18 INCHES.

(F) THE PROPOSED CULVERT CONSTRUCTION SHALL BE SEALED FROM THE EXISTING STREAM BY MEANS OF A SANDBAG BERM WHICH SHOULD BE AT THE SAME HEIGHT AS THE PLUG INSIDE THE BOX CULVERT. THIS BERM SHALL BE TIED INTO EITHER HIGH GROUND ADJACENT TO THE CHANNEL OR THE EXISTING ROADWAY EMBANKMENT. IT SHALL BE PROVIDED WITH A SPILLWAY EQUAL IN WIDTH TO THE BOX CULVERT AND AT A HEIGHT LOWER THAN THE REST OF THE BERM.

(G) THE TEMPORARY DRAINAGE PIPE SHALL BE SUPPORTED AT ALL JOINTS AND AT INTERVALS NOT TO EXCEED MAXIMUM VALUES SPECIFIED IN THE TABLE "MINIMUM SPAN FOR PIPE SUPPORTS." SUPPORTS MAY CONSIST OF SANDBAGS, CONCRETE BLOCKS, WOODEN FRAMES, OR ANY OTHER MATERIAL SUFFICIENT TO SUPPORT THE WEIGHT OF THE PIPE WHEN IT IS FILLED WITH WATER. SUPPORTS SHALL BE A MINIMUM OF 18 INCHES IN LENGTH, ALONG THE TEMPORARY DRAINAGE PIPE AND CENTERED ON THE JOINT. SUPPORTS SHOULD "CRADLE" THE TEMPORARY DRAINAGE PIPE TO ENSURE THAT IT WILL NOT ROLL DURING CONSTRUCTION OF THE BOX CULVERT.

(H) ALL PIPE JOINTS SHALL BE PROPERLY BANDED OR OTHERWISE PROVIDED WITH A REASONABLE SEAL AGAINST LEAKAGE.

(I) THE OPTIONAL FLEXIBLE PIPE DIVERSION USING PUMPS AND SHOWN ON STD. DWG., EC-STR-33A CAN BE USED AS AN ALTERNATE FOR SUSPENDED PIPE DIVERSIONS (UPSTREAM AND DOWNSTREAM).

(J) CONSTRUCTION SHALL PROCEED AS FOLLOWS:

1. INSTALL TEMPORARY DRAINAGE PIPE ON ITS SUPPORTS INSIDE THE CULVERT TO BE EXTENDED.
2. CONSTRUCT THE SANDBAG PLUG AT THE UPSTREAM END OF THE SUSPENDED PIPE DIVERSION.
3. CONSTRUCT THE SANDBAG BERM AT THE DOWNSTREAM END OF THE SUSPENDED PIPE DIVERSION.
4. ONCE THE BOX CULVERT EXTENSION HAS BEEN COMPLETED, REMOVE THE DOWNSTREAM SANDBAG STRUCTURE, EXCEPT FOR THOSE BAGS NEEDED TO SUPPORT THE END OF THE PIPE. THE UPSTREAM SANDBAG STRUCTURE SHOULD THEN BE REMOVED GRADUALLY, IN ORDER TO ALLOW THE UPSTREAM WATER LEVEL TO DRAW DOWN AT A SAFE RATE.
5. REMOVE THE TEMPORARY DRAINAGE PIPE, SUPPORTS AND ANY REMAINING SANDBAGS.

(K) TEMPORARY DRAINAGE PIPE, SANDBAG PLUGS, BERMS, AND SUPPORTS SHALL BE INSPECTED WEEKLY OR AFTER EVERY RAIN EVENT, ANY NEEDED REPAIRS SHALL BE DONE IMMEDIATELY. ANY DEBRIS WHICH HAS ACCUMULATED AT THE INLET OF THE SUSPENDED PIPE DIVERSION SHALL BE IMMEDIATELY REMOVED.

(L) FOR INSTALLATION DETAILS AND ITEM NUMBERS FOR DEWATERING STRUCTURES (EC-STR-1), SEDIMENT FILTER BAGS (EC-STR-2), AND SILT FENCE WITH WIRE BACKING (EC-STR-3), SEE THEIR RESPECTIVE STANDARD DRAWINGS.

(M) SUSPENDED PIPE DIVERSIONS (DOWNSTREAM) SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

209-09.01	SANDBAGS PER BAG
209-09.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM) PER SQUARE YARD
621-03.02	_____ "TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
621-03.11	
709-05.06	MACHINED RIP-RAP (CLASS A-1) PER TON
709-05.08	MACHINED RIP-RAP (CLASS B) PER TON
709-05.09	MACHINED RIP-RAP (CLASS C) PER TON

DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, AND SILT FENCE WITH WIRE BACKING SHALL BE PAID FOR ACCORDING TO THEIR RESPECTIVE STANDARD DRAWINGS.

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF SUSPENDED PIPE DIVERSIONS (DOWNSTREAM).

REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
REV. 4-1-08: REVISED, ADDED, AND RENUMBERED NOTES, MINOR EDITS TO DRAWING.
REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

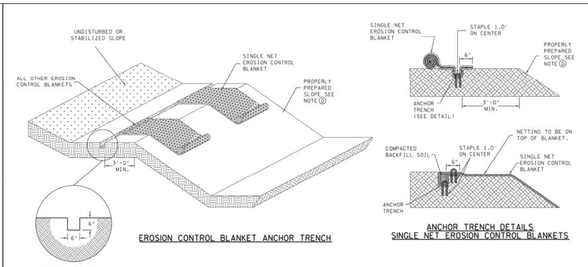
NOT TO SCALE

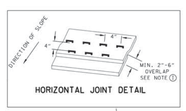
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

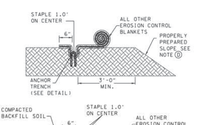
SUSPENDED PIPE DIVERSION (DOWNSTREAM)

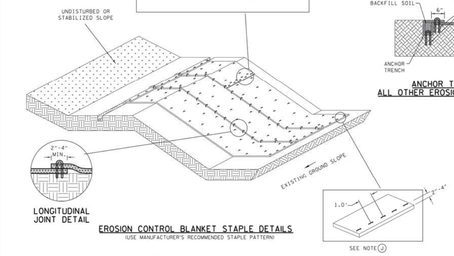
1-20-06 EC-STR-33

3 SUSPENDED PIPE DIVERSION - EC-STR-33
NOT TO SCALE









EROSION CONTROL PLAN LEGEND: EROSION CONTROL BLANKET

REV. 12-18-95: CHANGED DRAWING NO. FROM EC-STR-34 TO EC-STR-34.
REV. 1-22-03: LAPPED LONGITUDINAL JOINTS NOTE ADDED TO DETAILS (ITEM 805-12.01 FROM GENERAL NOTE (J) SINCE TYPE I BLANKETS ARE NO LONGER USED.
REV. 4-19-05: CHANGED GENERAL NOTE (J). CHANGED PLAN VIEW AND LONGITUDINAL SEAM VIEW.
REV. 4-1-08: MADRIN REVISED GENERAL NOTES, ADDED STANDARD NOTES, REVISED INSTALLATION DETAILS.
REV. 8-1-12: MINOR EDITS TO DRAWING AND GENERAL NOTES.

EROSION CONTROL BLANKET SLOPE INSTALLATION GENERAL NOTES

(A) EROSION CONTROL BLANKETS ARE INTENDED TO BE USED AS AN IMMEDIATE MULCH COVER FOR DISTURBED SLOPES THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED.

(B) EROSION CONTROL BLANKETS MAY ALSO BE USED AS CHANNEL LINERS WHERE THE ANTICIPATED MAXIMUM SHEAR STRESS IS LOW. REFER TO EC-STR-36 FOR INSTALLATION DETAILS.

(C) EROSION CONTROL BLANKETS SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS. WHEN NOT AVAILABLE, INSTALL ACCORDING TO NOTES D THRU J.

(D) STEP ONE: SITE PREPARATION
THE SITE SHOULD BE FINE GRADED TO A SMOOTH PROFILE AND RELATIVELY FREE FROM ALL WEEDS, CLODS, STONES, ROOTS, STICKS, RIVULETS, GULLIES, CRUSTING AND CAKING. FILL ANY VOIDS AND MAKE SURE THE SLOPE IS COMPACTED PROPERLY.

(E) STEP TWO: SEEDING
SEEDING WITHOUT MULCH SHOULD BE APPLIED TO THE AREA TO BE VEGETATED.

(F) STEP THREE: PREPARE THE ANCHOR TRENCH
AT THE TOP OF THE SLOPE EXCAVATE AN ANCHOR TRENCH 6 INCHES DEEP BY 6 INCHES WIDE. THE EROSION CONTROL BLANKET WILL BE ANCHORED INTO THE TRENCH BY STAPLES. ALLOW A MINIMUM OF 3 FEET FROM THE CREST OF THE SLOPE TO THE ANCHOR TRENCH.

(G) STEP FOUR: SECURE THE EROSION CONTROL BLANKET IN THE ANCHOR TRENCH
BEGIN EROSION CONTROL BLANKET PLACEMENT 30 INCHES ABOVE THE ANCHOR TRENCH. UNROLL THE EROSION CONTROL BLANKET INTO THE ANCHOR TRENCH. ANCHOR THE EROSION CONTROL BLANKET WITH STAPLES. FOLLOW MANUFACTURER'S RECOMMENDATIONS. BE SURE TO DRIVE STAPLES OR STAKES FLUSH WITH THE SOIL SURFACE. BACKFILL THE ANCHOR TRENCH AND COMPACT THE SOIL PLACED OVER THE COMPACTED SOIL. COVER THE COMPACTED SOIL WITH THE REMAINING 12 INCHES OF THE TERMINAL END OF THE EROSION CONTROL BLANKET. STAPLE OR STAKE TERMINAL END DOWN SLOPE OF THE ANCHOR TRENCH ON ONE FOOT CENTERS.

(H) STEP FIVE: EROSION CONTROL BLANKET DEPLOYMENT
START AT THE CREST OF THE SLOPE, ROLL THE EROSION CONTROL BLANKET DOWN THE SLOPE IN A CONTROLLED MANNER, APPROXIMATELY EVERY 20-25 FEET PULL THE EROSION CONTROL BLANKET TO TAKE OUT ANY EXCESS SLACK. THE GOAL IS TO HAVE THE EROSION CONTROL BLANKET CONTOUR AND INITIATE CONTACT WITH THE SOIL.

(I) STEP SIX: STAPLE OR STAKE THE EROSION CONTROL BLANKET
SECURE THE OVERLAP OF THE EDGES WITH STAPLES. THE TYPICAL INSTALLATION WILL REQUIRE ONE STAPLE PLACED AT THREE TO FIVE FEET INTERVALS ALONG THE VERTICAL LENGTH OF THE EROSION CONTROL BLANKET. STAPLES SHOULD BE STAGGERED EVERY 18 TO 24 INCHES HORIZONTALLY ACROSS THE EROSION CONTROL BLANKET. IF THE EROSION CONTROL BLANKET NEEDS TO BE SPLICED IN THE MIDDLE OF A SLOPE BE SURE THE EROSION CONTROL BLANKET IS "SHINGLED" WITH UPSLOPE EROSION CONTROL BLANKET OVERLAPPING THE DOWN-SLOPE EROSION CONTROL BLANKET. THERE SHOULD BE NO GAPS IN THE SOIL BETWEEN THE TWO BLANKETS. ON A SPLICE, USE A STAPLE CHECK SLOT TO SECURE THE OVERLAP. USE A STAPLE CHECK SLOT BY PLACING A ROW OF STAPLES 4-INCHES ON CENTER AND THEN PLACING A SECOND ROW OF STAPLES 4-INCHES ON CENTER, STAGGERED FROM THE FIRST ROW.

(J) STEP SEVEN: SECURING THE EROSION CONTROL BLANKET AT THE TOE OF SLOPE
ROLL THE EROSION CONTROL BLANKET 24-INCHES PAST THE TOE OF THE SLOPE. STAPLE OR STAKE TERMINAL END OF THE EROSION CONTROL BLANKET ON ONE FOOT CENTERS.

(K) ONLY EROSION CONTROL BLANKETS LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED.

(L) EROSION CONTROL BLANKETS FOR SLOPE INSTALLATION SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

801-02	SEEDING (WITHOUT MULCH) PER UNIT
801-02.01	CROWN VETCH MIXTURE (WITHOUT MULCH) PER UNIT
801-02.08	TEMPORARY SEEDING (WITHOUT MULCH) PER UNIT
805-12.01	EROSION CONTROL BLANKET (TYPE I) PER SQUARE YARD
805-12.02	EROSION CONTROL BLANKET (TYPE II) PER SQUARE YARD
805-12.03	EROSION CONTROL BLANKET (TYPE III) PER SQUARE YARD
805-12.04	EROSION CONTROL BLANKET (TYPE IV) PER SQUARE YARD

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF EROSION CONTROL BLANKETS.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL BLANKET FOR SLOPE INSTALLATION

10-26-92 EC-STR-34

5 EROSION CONTROL BLANKET - EC-STR-34
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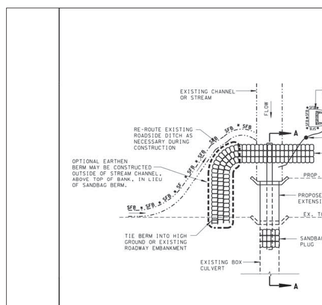
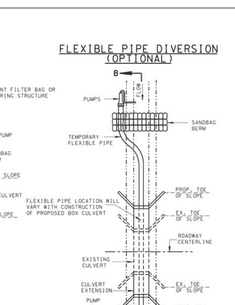
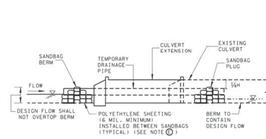
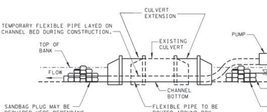








EROSION CONTROL PLAN LEGEND: SUSPENDED PIPE DIVERSION

SUSPENDED PIPE DIVERSION (UPSTREAM) GENERAL NOTES

(A) SUSPENDED PIPE DIVERSIONS MAY BE USED TO ALLOW BOX CULVERT EXTENSIONS TO BE CONSTRUCTED, WHILE SEPARATED FROM FLOWING WATER, THUS REDUCING SEDIMENTATION. FLEXIBLE PIPE DIVERSION MAY BE UTILIZED ON STREAMS WITH INTERMITTENT FLOW WHERE THE DURATION OF CONSTRUCTION IS EXPECTED TO BE BRIEF.

(B) SUSPENDED PIPE DIVERSIONS SHALL BE DESIGNED USING A 2-YEAR STORM FREQUENCY FLOW RATE, AT SITES WHICH INVOLVE EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE PIPE SHALL BE ADEQUATE TO CONVEY THE 5-YEAR, PEAK FLOW. THE TABLE "TEMPORARY DIVERSION CULVERT SELECTION" ON STANDARD DRAWING EC-STR-32 MAY BE USED AS A GUIDELINE FOR DETERMINING THE PIPE SIZE. FOR ANY SITE WHERE Dsp EXCEEDS 500 CFS, THE DESIGN OF THIS MEASURE SHOULD BE COMPLETED BY THE HYDRAULICS SECTION OF THE STRUCTURES DIVISION.

(C) SUSPENDED PIPE DIVERSIONS MAY BE USED WHERE ADVERSE IMPACTS WILL NOT BE CAUSED BY WATER PONDED UPSTREAM OF THE PIPE.

(D) THE SANDBAG PLUG AT THE DOWNSTREAM END OF THE SUSPENDED PIPE DIVERSIONS SHOULD BE CONSTRUCTED TO A HEIGHT EQUAL TO THREE QUARTERS OF THE RISE OF THE BOX CULVERT.

(E) POLYETHYLENE SHEETING (6 MIL. MINIMUM) SHALL BE PLACED INSIDE THE SANDBAG BERM IN THE CHANNEL AND THE SAND BAG PLUG IN THE BOX CULVERT IN ORDER TO PROVIDE THE BEST POSSIBLE SEAL. SANDBAGS ON THE DOWNSTREAM SIDE OF THE SHEETING SHOULD BE PLACED FIRST, AND THEN SHEETING PLACED ON THESE BAGS. AS MUCH AS POSSIBLE, THE SHEETING SHOULD BE FITTED AROUND THE PIPE. THE REMAINING SANDBAGS WOULD THEN BE PLACED ON THE SHEETING. WHERE MULTIPLE SHEETS ARE USED, THEY SHOULD OVERLAP A MINIMUM OF 18 INCHES.

(F) THE PROPOSED CULVERT CONSTRUCTION SHALL BE SEALED FROM THE EXISTING STREAM BY MEANS OF A SANDBAG BERM WHICH WILL BE TIED IN TO EITHER HIGH GROUND BESIDE THE CHANNEL OR THE EXISTING ROADWAY EMBANKMENT, UP TO THE 2-YEAR OR 5-YEAR FLOOD LEVEL.

(G) THE TEMPORARY DRAINAGE PIPE WILL BE SUPPORTED AT ALL JOINTS AND AT INTERVALS NOT TO EXCEED MAXIMUM VALUES SPECIFIED IN THE TABLE "MINIMUM SPAN FOR SUPPORTS." SUPPORTS MAY CONSIST OF SANDBAGS, CONCRETE BLOCKS, WOODEN FRAMES, OR ANY OTHER MATERIAL SUFFICIENT TO SUPPORT THE WEIGHT OF THE PIPE WHEN IT IS FULL. SUPPORTS AT JOINTS SHALL BE A MINIMUM OF 18 INCHES IN LENGTH, ALONG THE TEMPORARY DRAINAGE PIPE AND CENTERED ON THE JOINT. SUPPORTS SHOULD "CRADLE" THE TEMPORARY DRAINAGE PIPE TO ENSURE THAT IT WILL NOT ROLL DURING CONSTRUCTION OF THE BOX CULVERT.

(H) ALL PIPE JOINTS SHALL BE PROPERLY BANDED OR OTHERWISE PROVIDED WITH A REASONABLE SEAL AGAINST LEAKAGE.

(I) THE OPTIONAL FLEXIBLE PIPE DIVERSION CAN BE USED AS AN ALTERNATE FOR SUSPENDED PIPE DIVERSIONS (UPSTREAM OR DOWNSTREAM).

(J) CONSTRUCTION SHALL PROCEED AS FOLLOWS:

1. INSTALL TEMPORARY DRAINAGE PIPE ON ITS SUPPORTS INSIDE THE CULVERT TO BE EXTENDED.
2. CONSTRUCT THE SANDBAG BERM AT THE UPSTREAM END OF THE SUSPENDED PIPE DIVERSIONS.
3. CONSTRUCT THE SANDBAG PLUG AT THE DOWNSTREAM END OF THE SUSPENDED PIPE DIVERSIONS.
4. ONCE THE BOX CULVERT EXTENSION HAS BEEN COMPLETED, REMOVE THE DOWNSTREAM SANDBAG STRUCTURE, EXCEPT FOR THOSE BAGS NEEDED TO SUPPORT THE END OF THE PIPE. THE UPSTREAM SANDBAG STRUCTURE SHOULD THEN BE REMOVED GRADUALLY, IN ORDER TO ALLOW THE UPSTREAM WATER LEVEL TO DRAW DOWN AT A SAFE RATE.
5. REMOVE THE TEMPORARY DRAINAGE PIPE, SUPPORTS AND ANY REMAINING SANDBAGS.

(K) TEMPORARY DRAINAGE PIPE, SANDBAG PLUGS, BERMS, AND SUPPORTS SHALL BE INSPECTED WEEKLY OR AFTER EVERY RAIN EVENT, ANY NEEDED REPAIRS SHALL BE DONE IMMEDIATELY. ANY DEBRIS WHICH HAS ACCUMULATED AT THE INLET OF THE SUSPENDED PIPE DIVERSIONS SHALL BE IMMEDIATELY REMOVED.

(L) FOR INSTALLATION DETAILS AND ITEM NUMBERS FOR DEWATERING STRUCTURES (EC-STR-1), SEDIMENT FILTER BAGS (EC-STR-2), AND SILT FENCE WITH WIRE BACKING (EC-STR-3), SEE THEIR RESPECTIVE STANDARD DRAWINGS.

(M) SUSPENDED PIPE DIVERSIONS (UPSTREAM) SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

209-09.01	SANDBAGS PER BAG
209-09.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM) PER SQUARE YARD
621-03.02	_____ "TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
621-03.11	

DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, AND SILT FENCE WITH WIRE BACKING SHALL BE PAID FOR ACCORDING TO THEIR RESPECTIVE STANDARD DRAWINGS.

PUMPS AND FLEXIBLE PIPES SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEM NUMBERS.

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF SUSPENDED PIPE DIVERSIONS (UPSTREAM).

MAXIMUM SPAN FOR PIPE SUPPORTS, FEET

DIAMETER OF PIPE (IN.)	STEEL THICKNESS (IN.)				
	0.064	0.079	0.109	0.138	0.168
	2" X ½" CORRUGATION				
24	13	15	20		
36	12	15	20	25	
48	11	14	19	25	30
60		14	19	24	29
72			18	24	29
	5" X 1" OR 3" X 1" CORRUGATION				
36	9	11			
48	9	11	15		
60	8	10	14	18	
72	8	10	14		22

FOR PIPE SIZES NOT SHOWN REFER TO NEXT LARGER SIZE

SOURCE: HANDBOOK OF STEEL DRAINAGE AND HIGHWAY CONSTRUCTION PRODUCTS, 1994, P. 278

REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
REV. 4-1-08: REVISED, ADDED, AND RENUMBERED NOTES, MINOR EDITS TO DRAWING.
REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

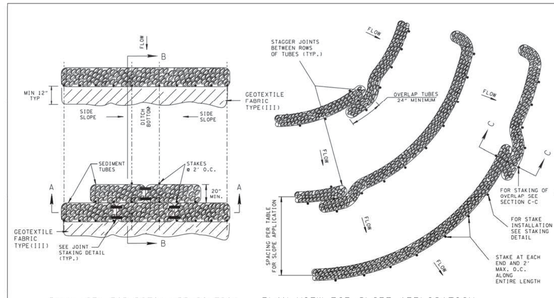
NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUSPENDED PIPE DIVERSION (UPSTREAM)

1-20-06 EC-STR-33A

4 SUSPENDED PIPE DIVERSON - EC-STR-33A
NOT TO SCALE



SEDIMENT TUBE SPACING FOR SLOPE APPLICATION

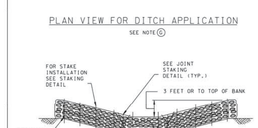
SLOPE	8"	12"	18"	20"	24"
2%	70'	80'	N/A	N/A	N/A
5%	50'	60'	80'	N/A	N/A
10%	20'	30'	70'	80'	80'
6:1	N/A	20'	40'	50'	55'
4:1	N/A	20'	30'	30'	30'
3:1	N/A	N/A	20'	20'	25'
2:1	N/A	N/A	20'	20'	20'

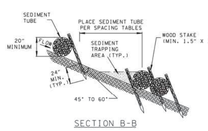
N/A = NOT RECOMMENDED
SPACING NOT TO EXCEED 80'

SEDIMENT TUBE SPACING TABLE FOR DITCH APPLICATION

SLOPE	MAXIMUM SEDIMENT TUBE SPACING
LESS THAN 2%	80'
2%	80'
3%	50'
4%	40'
5%	30'
6%	20'
GREATER THAN 6%	20'

BASED ON A 20" SEDIMENT TUBE
SEE TABLE ON EC-STR-6 FOR OTHER HEIGHTS.




SEDIMENT TUBE
PLACE SEDIMENT TUBE PER SPACING TABLES
WOOD STAKE (MIN. 1.5" X 1.5")
20" MINI

SWPPP INDEX OF SHEETS

(REFERENCE TO OLD CGP)(REFERENCE TO NEW CGP)

NOTE: CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (3.0) (5.0)

1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (3.1.1)?

☒ YES (CHECK ALL THAT APPLY BELOW) OR ☐ NO

- ☒ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☒ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☒ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (E.G. SEDIMENT BASINS) (3.1.1)? YES ☐ NO ☒

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT? ☐ YES ☐ NO

1.3. DO THE PROJECT STORMWATER OUTFALLS DIRECTLY DISCHARGE INTO THE FOLLOWING (5.4.1) (6.4.1)? ☒ YES (CHECK ALL THAT APPLY BELOW) ☐ NO

- ☒ WATERS WITH UNAVAILABLE PARAMETERS (303d FOR SILTATION OR HABITAT ALTERATION)
- ☐ EXCEPTIONAL TENNESSEE WATERS

IF YES TO SECTION 1.3, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (5.4.1.b)? (5.2)

☒ YES (CHECK ALL THAT APPLY BELOW) ☐ NO

- ☒ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☒ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☒ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

2. SITE DESCRIPTION (3.5.1) (5.5.1)

2.1. PROJECT LIMITS (3.5.1.h) (5.5.1.f): INCLUDES PERMANENT EASEMENTS, CONSTRUCTION EASEMENTS, AND RIGHT-OF-WAY (ROW) AS DEPICTED ON THE EPSC PLAN SHEETS.

2.2. LATITUDE: 35.274145; LONGITUDE: -89.710448

2.3. PROJECT DESCRIPTION (3.5.1.a) (5.5.1.a)

TITLE: CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A

COUNTY: SHELBY

DESCRIPTION: THE CONSTRUCTION OF APPROXIMATELY 16,000 LINEAR FEET (LF) OF 42-INCH, 200 LF OF 24-INCH, 4,000 LF OF 18-INCH, AND 1,300 LF OF 10-INCH SANITARY SEWER, INCLUDING ASSOCIATED STRUCTURES.

2.4. SITE MAP(S) (2.6.2.) (3.22): REFER TO “DOCUMENTATION AND PERMITS” BINDER

2.5. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d) (5.5.1.c): REFER TO EXISTING CONTOURS DEPICTED ON THE EPSC PLAN SHEETS OR THE EXHIBIT “EPSC DRAINAGE MAP”

2.6. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (5.5.1.a) (CHECK ALL THAT APPLY):

- ☒ CLEARING AND GRUBBING
- ☒ EXCAVATION AND TRENCHING
- ☒ BACKFILLING
- ☒ FINAL GRADING AND SHAPING
- ☒ UTILITIES
- ☐ OTHER (DESCRIBE): _____

2.7. TOTAL PROJECT AREA (3.5.1.c) (5.5.1.b): 49.2. ACRES

2.8. TOTAL AREA TO BE DISTURBED (3.5.1.c) (5.5.1.b): 44.3 ACRES

2.9. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT.

2.10. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? ☐ YES ☒ NO

IF YES, LIST THE CORRESPONDING PLAN SHEET: _____

2.11. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010 (4.1.2.2)?

☐ YES _____ (DATE) ☒ NO

IF ROW WAS FINALIZED PRIOR TO FEBRUARY 1, 2010, THIS PROJECT IS CONSIDERED A PRE-APPROVED SITE (4.1.2.2)

2.12. SOIL PROPERTIES (3.5.1.f) (4.1.1) (5.5.1.d, 5.5.3.3.d, 5.5.3.6.b)

SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES			
PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
Ca – Calloway silt loam, 0 - 2% slopes	D	4.6	0.49
Co– Collins silt loam, 0 - 2% slopes, occasionally flooded, brief duration	B	10.6	0.55
Fm – Falaya silt loam	B/D	23.7	0.49
GaB – Grenada silt loam, 2 - 5% slopes	C/D	0.2	0.55
GaB2 – Grenada silt loam, 2 - 5% slopes, eroded	C	2.2	0.55
GaC3 – Grenada silt loam, 5 - 8% slopes, severely eroded	D	0.6	0.55
GaD2 – Grenada silt loam, 8 - 12% slopes, eroded	C/D	2.2	0.55
GgD3 – Grenada complex, 5 - 12% slopes, severely eroded	C/D	2.8	0.55
He – Henry silt loam	D	23.3	0.55
LoD2 – Loring silt loam, 8 - 12% slopes, eroded	C/D	0.5	0.55
Wv – Waverly silt loam, 0 - 2% slopes, occasionally flooded, long duration	B/D	29.3	0.49

2.13. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? ☐ YES ☒ NO

2.13.1. IF YES TO SECTION 2.13, HAVE APR LOCATIONS BEEN IDENTIFIED WITHIN THE CONSTRUCTION PLANS AND/OR THE GEOTECHNICAL REPORT? ☐ YES ☐ NO; AND

2.13.2. IF YES TO SECTION 2.13.1, HAS A SPECIAL HANDLING PLAN AND/OR ADAPTIVE MANAGEMENT PLAN (AMP) BEEN PREPARED FOR THE PROJECT? ☐YES ☐ NO ☐ N/A (TDOT SP107L WILL BE APPLIED.)

2.14. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.g) (5.5.3.6.a)

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	2.65	5	98	0.98
PERVIOUS	46.55	95	78	0.23
WEIGHTED CURVE NUMBER OR C-FACTOR =			79	0.27

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	2.65	5	98	0.98
PERVIOUS	46.55	95	79	0.25
WEIGHTED CURVE NUMBER OR C-FACTOR =			80	0.29

3. ORDER OF CONSTRUCTION ACTIVITIES (3.5.1.b, 3.5.2.a) (5.5.1.a)

3.1. SPECIAL SEQUENCING REQUIREMENTS FOR WETLAND CROSSINGS AND STREAM CROSSINGS (SEE SHEET EPSC-001)

3.2. AS WORK PROCEEDS FROM DOWNSLOPE TO UPSLOPE, INSTALL STABILIZED CONSTRUCTION EXITS. FIELD MARK LIMITS OF DISTURBANCE.

3.3. AS WORK PROCEEDS FROM DOWNSLOPE TO UPSLOPE, INSTALL PERIMETER EPSC MEASURES BEFORE CLEARING, GRUBBING, EXCAVATION, CULVERT CONSTRUCTION, BACKFILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.

3.4. AS WORK PROCEEDS FROM DOWNSLOPE TO UPSLOPE, LIMIT ADVANCE CLEARING AND GRUBBING TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY. DO NOT CLEAR OR GRUB PREEXISTING VEGETATION MORE THAN 7 DAYS PRIOR TO EXCAVATION OR EARTH-MOVING.

3.5. REMOVE AND STORE TOPSOIL. STOCKPILE TOPSOIL ALONG THE UPSLOPE SIDE OF THE EASEMENT. TOPSOIL TO BE COVERED WITH VISQUEEN FOIL OR SEEDED AND MULCHED IMMEDIATELY. (ALTHOUGH NOT SPECIFICALLY DEPICTED IN THE EPSC PLANS, THE STABILZED, STOCKPILED TOPSOIL ACTS AS A BERM, WHICH MAY REDIRECT OFFSITE RUNOFF AROUND THE OPEN TRENCH.)

3.6. ALL EXCAVATION FOR UTILITY LINE INSTALLATION SHALL BE LIMITED TO THE AMOUNT THAT CAN BE EXCAVATED, INSTALLED, BACKFILLED, AND STABILIZED WITHIN ONE WORKING DAY. ALL EXCAVATED MATERIALSHALL BE DEPOSITED ON THE UPSLOPE SIDE OF THE TRENCH.

3.7. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE TREATED BY A FILTRATION DEVICE.

3.8. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO THE ORIGINAL CONTOUR OF THE LAND AND IMMEDIATELY STABILIZED.

3.9. STABILIZE DISTURBED AREAS WITHIN 7 DAYS OF COMPLETING ANY STAGE AND/OR PHASE OF ACTIVITY.

3.10. COMPLETE FINAL STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)

3.11. REMOVE TEMPORARY EROSION CONTROLS FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT UNIFORM PERMANENT VEGETATIVE COVER.

3.12. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

4.1. STREAM INFORMATION (3.5.1.j, 3.5.1.k) (5.5.1.h, 5.5.1.j)

4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? ☒ YES ☐ NO

IF YES, THE IMPACT(S) HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE WATER QUALITY PERMITS.

4.1.2. HAVE ANY OF THE RECEIVING STATE WATERS LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):

- ☒ 303d WITH UNAVAILABLE PARAMETERS FOR SILTATION
- ☒ 303d WITH UNAVAILABLE PARAMETERS FOR HABITAT ALTERATION
- ☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

4.1.3. RECEIVING WATERS OF THE STATE (3.5.1.k) (5.5.1.h, 5.5.1. j, 5.5.1.k)

BUCHART HORN ENGINEERS • ARCHITECTS • PLANNERS

DATE: 07/18/2022

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	N/A
ENGR./ARCH.:	NMC
DESIGN BY:	NMC
DRAWN BY:	NMC
CHECKED BY:	
DATE:	

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

DRAWING NO.
SWPPP– 1

RECEIVING WATERS OF THE STATE INFORMATION					
STATE WATER LABEL	NAME OF RECEIVING STATE WATER	303d WITH UNAVAILABLE PARAMETERS FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	ETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
STR-1	UNNAMED TRIB. TO SCOTT'S CREEK	NO	NO	YES	YES
STR-2	UNNAMED TRIB. TO LOOSAHATCHIE RIVER	NO	NO	YES	YES
STR-3	UNNAMED TRIB. TO CLEAR CREEK	NO	NO	YES	YES
STR-4	UNNAMED TRIB. TO CLEAR CREEK	NO	NO	YES	YES
--	SCOTT'S CREEK	NO	NO	NO	YES
--	LOOSAHATCHIE RIVER	YES	NO	NO	YES
--	CLEAR CREEK	YES	NO	NO	YES

4.1.4. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WATERS OF THE STATE? (4.1.2, 5.4.2) (5.5.1.l, 6.4.2)

☒ YES ☐ NO

BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2.)

IF YES, THEY HAVE BEEN INCLUDED ON EPSC PLAN SHEETS UTILIZING HIGH VISIBILITY FENCE (HVF).

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.

☒ 60-FEET FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET).

A 60 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET).

A 30 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

4.1.5. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR STATE WATERS DUE TO A TDEC ARAP? (9.0) (1.5.2)

☒ YES ☐ NO

4.1.6. ARE THERE WATER QUALITY RIPARIAN BUFFER ZONE EXEMPTIONS? (4.1.2.1) ☐ YES ☒ NO

IF YES, EXISTING CONDITIONS DESCRIPTION:_____

4.1.7. EVERY ATTEMPT SHOULD BE MADE FOR CONSTRUCTION ACTIVITIES TO NOT TAKE PLACE WITHIN THE WATER QUALITY RIPARIAN BUFFER ZONE AND FOR EXISTING FORESTED AREAS TO BE PRESERVED. (5.4.2.) (4.1.2, 6.4.2)

4.1.8. BECAUSE OF HEAVY SEDIMENT LOAD ASSOCIATED WITH CONSTRUCTION SITE RUNOFF, WATER QUALITY RIPARIAN BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE WATER QUALITY RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA.

4.1.9. WHERE IT IS NOT PRACTICABLE TO MAINTAIN A FULL WATER QUALITY RIPARIAN BUFFER, BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MUST BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

4.2. RECEIVING WATERS OF THE UNITED STATES (WOTUS) (EPHEMERAL)

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WOTUS (EPHEMERAL)? ☐ YES ☒ NO

RECEIVING WOTUS (EPHEMERAL) INFORMATION		
WOTUS LABEL	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN 15-FT OF THE PROJECT LIMITS (YES OR NO)
N/A		

4.2.1. ARE WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WOTUS (4.1.2)? ☐ YES ☒ NO

IF YES, A 15 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING EPHEMERAL STREAM IDENTIFIED AS A WOTUS (EPHEMERAL) BY THE U.S. ARMY CORPS OF ENGINEERS (USACE) OR THE ENVIRONMENTAL PROTECTION AGENCY SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE.

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____

4.2.2. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR WOTUS (EPHEMERAL) DUE TO A USACE PERMIT?

☐ YES ☒ NO

4.3. OUTFALL INFORMATION

4.3.1. OUTFALL TABLE (3.5.1.e) (5.5.1.c). SEE SHEET SWPPP-8 FOR OUTFALL INFORMATION.

4.3.2. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.h) (5.5.1.f)? ☒ YES ☐ NO

4.3.3. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (2.6.2) (3.2.2)? ☒YES ☐ NO

4.3.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED AROUND OR THROUGH THE PROJECT TO ELIMINATE CONTACT WITH DISTURBED AREAS OF THE PROJECT AND SEPARATE IT FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA OF TO THE OUTFALLS IN THIS AREA?

☒ YES ☐ NO ☐ N/A

4.3.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S) (5.5.3.5)? ☒ YES ☐ NO ☐ N/A

THE PROJECT IS THE INSTALLATION OF LINEAR, BURIED SANITARY SEWER. SEWER CONSTRUCTION IS NOT SUITED TO SEDIMENT BASINS SINCE THE PROJECT AREA IS LONG, NARROW, AND CROSSES MULTIPLE DRAINAGE AREAS AND THE ACTIVE CONSTRUCTION IS RELATIVELY LOCALIZED AND OF SHORT DURATION. KEY TECHNIQUES UTILIZED IN LIEU OF SEDIMENT BASINS OR TRAPS INCLUDE:

4.3.5.1. CONSTRUCTION SEQUENCING TO MINIMIZE PERIODS OF EARTH DISTURBANCE

4.3.5.2. STORING STABILIZED TOPSOIL AND EXCAVATED MATERIALS UPGRADIENT OF THE UTILITY TRENCH WHICH ALLOWS STORMWATER TO BE ROUTED AROUND THE ACTIVE CONSTRUCTION AREA AND ALLOWS THE TRENCH TO CAPTURE ANY LOCALIZED SOIL MIGRATION

4.3.5.3. PIPE DIVERSIONS TO CONVEY FLOW NON-EROSIVELY THROUGH THE CONSTRUCTION SITE

4.3.5.4. STRATEGIC USE OF SOD FOR IMMEDIATE STABILIZATION IN SENSITIVE AREAS

4.3.6. A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (3.5.3.3) (5.5.3.5)

OR

OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (5.4.1.g) (6.4.1.e)

IN BOTH INSTANCES, THE CITY OF LAKELAND MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

4.4. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? ☒ YES ☐ NO

IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND IN THE WATER QUALITY PERMITS.

WETLAND INFORMATION			
WETLAND LABEL	APPROXIMATE STATION	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)
WTL-1	108+50	0.009	0
WTL-2	154+50	1.585	0
WTL-3	177+00	0.209	0
WTL-4	223+50	0.146	0
WTL-5	232+00	0.524	0
WTL-6	244+00	0.807	0

4.5. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10) (1.3.j)

4.5.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION AND HABITAT ALTERATION?

☐YES ☒ NO

4.5.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)?

☐ YES ☐ NO

4.5.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION?

☐ YES ☐ NO

4.5.4. IF YES, HAS A SUMMARY OF THE CONSULTATION LETTER BEEN SUBMITTED/RECEIVED?

☐ YES ☐ NO

4.6. ECOLOGY INFORMATION (3.5.5.e)

HAVE ANY SPECIAL NOTES ASSOCIATED WITH ECOLOGY BEEN ADDED TO THE PLAN SHEETS?

☐ YES ☒ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.

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STATE OF TENNESSEE — REGISTERED ENGINEER — 18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	N/A
ENGR./ARCH.:	NMC
DESIGN BY:	NMC
DRAWN BY:	NMC
CHECKED BY:	
DATE:	

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.
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STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

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4.7. ENVIRONMENTAL COMMITMENTS

ARE THERE ANY SPECIFIC ENVIRONMENTAL COMMITMENTS?

☐ YES ☒ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.

5. <u>EROSION PREVENTION & SEDIMENT CONTROL (EPSC) MEASURES</u> (3.5.3) (5.5.3)

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1). (5.5.3.a)

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS, AND STREAM BANKS. (4.1.1) (5.5.3.6.a)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED PER THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3) (5.5.3.5)?

☒YES ☐ NO

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 5-YEAR, 24 HOUR STORM EVENT (3.5.3.3, 5.4.1.a) (5.5.3.5, 6.4.1.b)

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (3.5.1.h) (5.5.1.f)? ☒ YES ☐ NO IN GENERAL, THE ENTIRETY OF PERMANENT AND TEMPORARY CONSTRUCTION EASEMENTS ARE AVAILABLE FOR USE DURING CONSTRUCTION AND ARE EXPECTED TO BE DISTURBED UNLESS LIMITED AS INDICATED BY THE USE OF HIGH VISIBILITY FENCE (HVF).

5.6. AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

5.7. UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND THE SUBJECT PERMANENT EASEMENT LINES, TEMPORARY EASEMENT LINES, PUBLIC ROW LINES, OR CITY OF LAKELAND PROPERTY LINES.

5.8. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION, INCLUDING STREAM AND WETLAND BUFFERS (UNLESS PERMITTED), SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

5.9. HAVE STAGED EPSC PLANS BEEN PREPARED FOR THE PROJECT (3.5.2) (5.5.2)?

YES ☒ NO ☐ (IF YES, CHECK ONE BELOW)

5.9.1. ☐ PROJECT DISTURBED AREA IS THAN LESS THAN 5 ACRES (MINIMUM OF TWO STAGES OF EPSC PLANS)

5.9.2. ☒ PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE STAGES OF EPSC PLANS)

5.10. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT. HAVE STEEP SLOPES BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (3.5.3.2) (5.5.3.4) (10. "STEEP SLOPE")? ☒ YES ☐ NO ☐ N/A

5.11. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (3.5.1.j) (5.5.1.h), IF APPLICABLE. REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SHEET <u>SWPPP-7</u>. ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.

5.12. THE EPSC CONTROL MEASURES LISTED ON THE EPSC PLANS HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, THE CITY OF LAKELAND STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES (3.5.3.1.b) (5.1, 5.5.3.1.b, 5.5.3.5).

5.13. EPSC MEASURES SHALL BE INSTALLED PER TDOT STANDARDS (i.e. STANDARD DRAWINGS) AND/OR THE CITY OF LAKELAND STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS, AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.

5.14. EPSC MEASURES WILL NOT BE INSTALLED WITHIN A STREAM WITHOUT FIRST OBTAINING APPROVAL FROM THE CITY OF LAKELAND.

5.15. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE A PRECIPITATION EVENT.

5.16. EPSC MEASURES LOCATED IN WOTUS (EPHEMERAL STREAMS) MUST BE CONSIDERED TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.

5.17. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED TO A LEVEL SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT. SEDIMENT THAT MIGRATES INTO WATERS OF THE STATE/US SHALL NOT BE REMOVED WITHOUT GUIDANCE FROM THE CITY OF LAKELAND.

5.18. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

5.19. STABILIZED CONSTRUCTION EXIT(S) PER TDOT STANDARDS (OR THE CITY OF LAKELAND STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS) HAVE BEEN SHOWN ON EPSC PLANS (3.5.3.1.n)

5.20. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS THAT PROVIDE THE LEVEL OF TREATMENT (FILTRATION) NECESSARY TO COMPLY WITH PERMIT REQUIREMENTS. (4.1.4) (4.1.3).

5.21. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.

5.22. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE, WELL- VEGETATED AND/OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. (4.1.7) (5.5.3.5)

5.23. THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

5.24. WATER DISCHARGED FROM DEWATERING ACTIVITIES SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD WITHIN SETTLING BASINS UNTIL IT IS AT LEAST AS CLEAR AS THE RECEIVING WATERS.

5.25. DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, SEDIMENT BASINS AND TRAPS SHALL NOT BE LOCATED CLOSER THAN 30 FEET (60 FEET DESIRABLE VEGETATIVE BUFFER) FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS AND 15 FEET (30 FEET DESIRABLE VEGETATIVE BUFFER) FOR ALL OTHER FEATURES FROM THE TOP BANK OF A STREAM, WOTUS (EPHEMERAL), WETLAND OR OTHER NATURAL RESOURCE AND SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.

5.26. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 14 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (3.5.3.1.h) (5.5.3.5.f)

5.27. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (3.5.3.2) (5.5.3.4)

5.28. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.

UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE

5.29. DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

5.30. A SOIL ANALYSIS SHALL BE PERFORMED PRIOR TO THE APPLICATION OF FERTILIZERS TO ANY PORTION OF THE SITE. SOILS SHOULD BE ANALYZED FOR pH, BUFFER VALUE, PHOSPHOROUS, POTASSIUM, CALCIUM AND MAGNESIUM. SOIL SAMPLES SHOULD BE REPRESENTATIVE OF THE AREA FOR WHICH FERTILIZER WILL BE APPLIED. SAMPLE TYPE SHOULD BE COLLECTED AND ANALYZED IN ACCORDANCE WITH THE UT EXTENSION "SOIL TESTING" BROCHURE PB1061. (4.1.5.)

5.31. FERTILIZERS SHALL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED FROM THE ANALYSES. ONCE APPLIED, FERTILIZERS SHALL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.

5.32. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. (3.5.3.2) (5.5.3.4)

6. <u>FLOCCULANTS (3.5.3.1.b) (5.5.3.5)</u>

IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a) (5.5.3.5)? ☐ YES ☒ NO

IF YES, THE FOLLOWING NOTES APPLY:

6.1. POLYACRYLAMIDES (PAM) SHALL BE OF THE ANIONIC OR NEUTRALLY CHARGED TYPE ONLY. PAM REQUIREMENTS ARE AS FOLLOWS:

6.1.1. CATIONIC PAM IS NOT ALLOWED BECAUSE OF ITS TOXICITY TO FISH AND AQUATIC LIFE.

6.1.2. ANIONIC AND NEUTRALLY CHARGED PAM SHALL MEET THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR LESS THAN 0.05% BY WEIGHT ACRYLAMIDE MONOMER.

6.1.3. ANIONIC AND NEUTRALLY CHARGED PAM SHALL HAVE A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLES.

6.1.4. PAM MIXTURES SHALL BE NON-COMBUSTIBLE.

6.1.5. PAM SHALL CONTAIN ONLY MANUFACTURER-RECOMMENDED ADDITIVES.

6.2. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURE'S GUIDELINES AND FULLY DESCRIBED ON THE EPSC PLANS (3.5.3.1.b).

6.3. FLOCCULANTS SHALL BE HANDLED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIED USE CONFORMING TO ALL FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS.

6.4. ALL VENDORS AND SUPPLIERS OF FLOCCULANTS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT FOR BOTH ACUTE AND CHRONIC TOXICITY TESTS WHICH VERIFIES THAT THE FLOCCULANT EXHIBITS ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPA REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIC POTENTIALS HAVE BEEN REDUCED.

6.5. DO NOT APPLY FLOCCULANTS DIRECTLY TO, OR WITHIN 60 FEET, OF ANY STREAMS, WETLANDS, OR OTHER NATURAL WATER RESOURCE LOCATED ON OR ADJACENT TO THE CONSTRUCTION SITE. DO NOT APPLY FLOCCULANTS DIRECTLY INTO WATERS CONTAINED WITHIN SEDIMENT PONDS OR TO SLOPES THAT PRODUCE RUNOFF DIRECTLY INTO A STREAM, WETLAND, OR OTHER NATURAL WATER RESOURCE. DO NOT APPLY FLOCCULANTS IMMEDIATELY AT A STORMWATER OUTFALL WHERE RUNOFF LEAVES THE PROJECT LIMITS.

6.6. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. DO NOT

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STATE OF TENNESSEE
CHRISTOPHER M. CLEVELAND
REGISTERED ENGINEER
CERTIFICATE NO. 120351
07/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	N/A
ENGR./ARCH.:	NMC
DESIGN BY:	NMC
DRAWN BY:	NMC
CHECKED BY:	
DATE:	

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

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APPLY EMULSION FORMS OF FLOCCULANTS DIRECTLY TO STORMWATER RUNOFF OR TO STREAMS, WETLANDS, OR OTHER WATER RESOURCES DUE TO SURFACTANT TOXICITY.

6.7. FLOCCULANT POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. IF APPROVED BY THE MANUFACTURER, FLOCCULANT MAY BE MIXED WITH DRY SILICA SAND, FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS TO AID IN SPREADING. FLOCCULANTS MAY ALSO BE APPLIED WITH A WATER TRUCK OR AS PART OF HYDRO-SEEDING. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

6.8. MANUFACTURER'S GUIDANCE SHOULD BE FOLLOWED FOR BLOCK, LOG AND SOCK SPACING CONFIGURATIONS. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE.

7. UTILITY RELOCATION

ARE UTILITIES INCLUDED IN THE CONTRACT? ☐ YES ☒ NO

IF YES, THE FOLLOWING APPLY:

7.1. STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.

7.2. SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. ANY TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS, REMOVED AND STABILIZED BY THE END OF THE WORK DAY.

7.3. UTILITY CROSSINGS IN ENVIRONMENTAL FEATURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. ENVIRONMENTAL PERMITS APPLY TO UTILITIES IN THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.

7.4. IT IS THE RESPONSIBILITY OF THE UTILITY CONTRACTOR TO PROTECT EXPOSED EARTH FROM EROSION AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE EPSC MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME, SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.

7.5. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN FOURTEEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOILS OF EXCAVATED EARTH SHALL BE LOCATED WITHIN PROJECT EPSC MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE UTILITY CONTRACTOR UNTIL THE TRENCH IS BACKFILLED.

7.6. IN REGARDS TO EPSC, TDEC REGULATIONS APPLY TO THE UTILITY CONTRACTORS ON THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE CONTRACT.

7.7. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORMWATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EPSC MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE CITY OF LAKELAND.

7.8. FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE RIGHT-OF-WAY, EPSC MEASURES SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.

7.9. THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE CITY OF LAKELAND.

7.10. THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EPSC MEASURES TO REPLACE ONSITE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE CITY OF LAKELAND BEFORE COMMENCING WORK.

7.11. FOR UTILITY CROSSINGS THAT UTILIZE HORIZONTAL DIRECTIONAL DRILLING THE FOLLOWING SHALL APPLY:

7.11.1. THE ENTRY AND EXIT POINTS SHALL BE AT LEAST 50 FEET FROM THE STREAM BANK OR WETLAND BOUNDARY.

7.11.2. THE DEPTH OF BORE BELOW THE STREAMBED IS SUFFICIENT TO PREVENT RELEASE OF DRILLING FLUID, BASED ON THE PARENT MATERIAL.

7.11.3. A SITE-SPECIFIC CONTINGENCY AND CONTAINMENT PLAN FOR INADVERTENT RELEASE OF DRILLING FLUID SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL BE SUBMITTED TO THE CITY OF LAKELAND FOR REVIEW AND APPROVAL.

8. MAINTENANCE AND INSPECTION

8.1. INSPECTION PRACTICES (3.5.8) (5.5.3.9)

8.1.1. PROJECT EPSC INSPECTORS (INCLUDING CITY OF LAKELAND STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE. AND/OR REPAIR OF EPSC MEASURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS (3.5.8.1.) (5.5.3.10)

8.1.1.1. SUCCESSFULLY COMPLETED THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE AND ANY RECERTIFICATION COURSES AS REQUIRED.

8.1.1.2. BE A CURRENT TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT.

8.1.1.3. BE A CURRENT CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).

8.1.1.4. SUCCESSFULLY COMPLETED TDEC "LEVEL II – DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.2. THE CITY OF LAKELAND (OR THEIR DULY AUTHORIZED REPRESENTATIVE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CITY OF LAKELAND OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL COMPLETE THE EPSC INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

8.1.3. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED (10 "INSPECTOR") (3.5.1.o) (5.5.1.f).

8.1.4. EPSC CONTROLS SHALL BE INSPECTED TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND SPECIFICATIONS, THE CITY OF LAKELAND STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE CITY OF LAKELAND ADDITIONAL CONSTRUCTION INSPECTION INFORMATION FORM AND THE TDEC CONSTRUCTION STORMWATER INSPECTION CERTIFICATION (TWICE-WEEKLY INSPECTIONS) FORM.

8.1.5. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING STATE WATERS, WOTUS (EPHEMERAL), WETLANDS, OTHER NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

8.1.6. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (3.5.8.2.a) (5.5.3.11.a). A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY.

8.1.7. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH WHERE SITES OR PORTIONS OF SITES HAVE BEEN TEMPORARILY STABILIZED UNTIL CONSTRUCTION ACTIVITIES RESUME WITH WRITTEN NOTIFICATION BY THE CITY OF LAKELAND TO THE TDEC FIELD OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (3.5.8.2.a) (5.5.3.11.a).

8.1.8. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (3.5.8.2.b) (5.5.3.11.b).

8.1.9. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, USACE SECTION 404, AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").

8.1.10. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION (3.5.8.2.e AND 3.5.8.2.f) (5.5.3.11.e AND 5.5.3.11.f).

8.1.11. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE CITY OF LAKELAND PER THE CONTRACT.

8.1.12. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

8.1.13. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (3.5.8.2.h) (5.5.3.11.h)

8.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3) (8.7.3)

THE CITY OF LAKELAND MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE CITY OF LAKELAND AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST COMPLETE AND SIGN THE DULY AUTHORIZED REPRESENTATIVE FORM.

8.3. MAINTENANCE PRACTICES (3.5.3.1 AND 3.5.7) (5.1 AND 8.1.3)

8.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER AND IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, THE CITY OF LAKELAND STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. (3.5.3.1.b) (5.1 AND 5.5.3.1.b).

8.3.2. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8.3.3. UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE, MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE 24-HOUR TIMEFRAME, WRITTEN DOCUMENTATION PROVIDED BY THE CONTRACTOR SHALL BE PLACED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION. (3.5.8.2.e) (5.5.3.11.e)

8.3.4. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES (SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, OTHER CONTROLS, ETC.) WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). (3.5.3.1.e). (5.5.3.1.d)

8.3.5. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.

8.3.6. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	N/A
ENGR./ARCH.:	NMC
DESIGN BY:	NMC
DRAWN BY:	NMC
CHECKED BY:	
DATE:	

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

DRAWING NO.
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8.3.7. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS, DOES NOT MIGRATE INTO FEATURES REMOVED FROM, AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND/OR INTO WATERS OF THE STATE/U.S.

8.3.8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (3.5.3.1.f) (5.5.3.7.a).

8.3.9. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

9. SITE ASSESSMENTS (3.1.2) (5.5.3.8)

9.1 A SITE ASSESSMENT SHALL BE CONDUCTED AT EACH OUTFALL INVOLVING DRAINAGE TOTALING 5 OR MORE ACRES WITHIN A MONTH OF CONSTRUCTION COMMENCING AT EACH PORTION OF THE SITE THAT DRAINS THE QUALIFYING ACREAGE OF SUCH PORTIONS OF THE SITE.

9.1.1 IS A SITE ASSESSMENT REQUIRED? ☐ YES ☒ NO

9.2 THE SITE ASSESSMENT SHALL BE PERFORMED BY INDIVIDUALS WITH THE FOLLOWING QUALIFICATIONS:

9.2.1 A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT;

9.2.2 A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) OR

9.2.3 TDEC LEVEL II

9.3 THE SITE ASSESSMENT FINDINGS SHALL BE DOCUMENTED AND KEPT WITH THE SWPPP AT THE SITE.

9.4 THE SITE ASSESSMENT CAN TAKE THE PLACE OF ONE OF THE TWICE WEEKLY INSPECTIONS.

10. STORMWATER MANAGEMENT (3.5.4) (5.5.3.11.h)

10.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE DEPICTED ON THE PLANS AND NOTED AS PERMANENT.

10.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.4): (5.5.3.6.c) NO SPECIFIC MEASURES.

10.3. OTHER ITEMS NEEDING CONTROL (3.5.5) (5.5.3.7)

CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ LUMBER, TRAFFIC CONTROL DEVICES
☒ CONCRETE WASHOUT
☒ PIPE CULVERTS (I.E. CONCRETE, CORRUGATED METAL, HDPE, ETC.)
☒ MINERAL AGGREGATES, ASPHALT
☒ EARTH
☒ LIQUID TRAFFIC STRIPING MATERIALS, PAINT
☒ ROCK
☐ CURING COMPOUND
☐ EXPLOSIVES
☐ OTHER _____

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

10.4. WASTE MATERIALS (3.5.5.b) (5.5.3.7.c)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE CONSTRUCTION CONTRACT AND FEDERAL AND STATE REGULATIONS. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

10.5. HAZARDOUS WASTE (3.5.5.c) (7.9) (5.5.3.7.c) (8.8)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

10.6. SANITARY WASTE (3.5.5.b) (5.5.3.7.b)

PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

10.7. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ FERTILIZERS AND LIME
☐ PESTICIDES AND/OR HERBICIDES
☒ DIESEL AND GASOLINE
☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

11. NON-STORMWATER DISCHARGES (3.5.9) (5.5.3.12)

11.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT (CHECK ALL THAT APPLY):

☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER.
☒ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES THE SITE.
☒ WATER USED TO CONTROL DUST. (3.5.3.1.n)
☐ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.
☒ UNCONTAMINATED GROUNDWATER OR SPRING WATER.
☐ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS.
☐ OTHER: _____

11.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

11.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.

11.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

11.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.i) (5.5.1.g)?

☐ YES ☒ NO

IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER: _____

12. SPILL PREVENTION, MANAGEMENT & NOTIFICATION (3.5.5.c, 5.1) (5.5.3.7.g, 6.1)

12.1. SPILL PREVENTION (3.5.5.c)

12.1.1. CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ON-SITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE TANKS WITH AGGREGATE STORAGE CAPACITY IN EXCESS OF 1,320 GALLONS SHALL HAVE SECONDARY CONTAINMENT.

12.1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE SPILL PREVENTION AND CONTROL BEST MANAGEMENT PRACTICE (AM-07) PER THE CITY OF MEMPHIS/SHELBY COUNTY STORM WATER MANAGEMENT MANUAL AND COMPLYING WITH APPLICABLE LAWS.

12.1.3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ON-SITE AND A COPY PROVIDED TO THE CITY OF LAKELAND.

12.2. MATERIAL MANAGEMENT

12.2.1. HOUSEKEEPING

ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

12.2.2. HAZARDOUS MATERIALS

PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RE-SEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL pH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

12.3. PRODUCT SPECIFIC PRACTICES

12.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

12.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY THE SOIL ANALYSIS OR THE CITY OF LAKELAND. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

12.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF PER THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

12.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER

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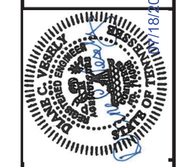

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	N/A
ENGR./ARCH.:	NMC
DESIGN BY:	NMC
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CHECKED BY:	
DATE:	

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND EXTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

DRAWING NO.
SWPPP– 5

OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

12.4. SPILL MANAGEMENT

IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY:

12.4.1. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.

12.4.2. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BOOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.

12.4.3. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

12.4.4. THE CONTRACTOR'S RESPONSIBLE PARTY WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

12.4.5. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.

12.4.6. IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.

12.4.7. IF A SPILL OCCURS THE CONTRACTOR'S SITE SUPERINTENDENT SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE CITY OF LAKELAND. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

12.4.8. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

12.5. SPILL NOTIFICATION (5.1) (6.1)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO, OR MORE THAN A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:

12.5.1. THE CITY OF LAKELAND WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.

12.5.2. IN ADDITION TO ANY FOLLOW UP NOTIFICATIONS REQUIRED BY FEDERAL LAW, A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE.

12.5.3. THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

13. RECORD-KEEPING

13.1. REQUIRED RECORDS

THE CITY OF LAKELAND OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (4.1.5.) (6.2.1) (7.2.1)

13.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.

13.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.

13.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

13.1.4. RECORDS EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES.

13.1.5. RECORDS OF ANY SITE ASSESSMENTS.

13.1.6. COPY OF SITE EPSC INSPECTOR'S CERTIFICATION AND/OR LICENSING

13.1.7. COPY OF REQUIRED SOIL ANALYSIS

13.1.8. A COPY OF ANY REGULATORY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS.

13.2. RAINFALL MONITORING PLAN (3.5.3.1.o) (7.2.1)

13.2.1. EQUIPMENT

AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

13.2.2. LOCATION

THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC.). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

13.2.3. METHODS

RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

13.2.4. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON CITY OR FEDERAL HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

13.2.5. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE CITY OF LAKELAND RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

13.2.6. IF THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

13.2.7. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

13.3. KEEPING PLANS CURRENT (3.4) (5.4)

13.3.1. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL REGULATORY OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

13.3.2. THE STAGES DEPICTED WITHIN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL STAGES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE STAGES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS MUST BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

13.3.3. THE CITY OF LAKELAND OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

13.3.3.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

13.3.3.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

13.3.3.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

13.3.3.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

13.3.3.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS.

13.3.3.6. ALL SWPPP REVISION(S) SHALL BE RECORDED WITHIN 7 DAYS BY THE PROJECT EPSC INSPECTOR.

13.3.3.7. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION), CONSTRUCTION SHALL NOTIFY THE PERMITS SECTION FOR PROPER COORDINATION.

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	N/A
ENGR./ARCH.:	NMC
DESIGN BY:	NMC
DRAWN BY:	NMC
CHECKED BY:	
DATE:	

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

DRAWING NO.
SWPPP– 6

13.4. MAKING PLANS ACCESSIBLE

13.4.1. THE CITY OF LAKELAND WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL STABILIZATION. THE CITY OF LAKELAND WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (6.2). (7.2)

13.4.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, THE CITY OF LAKELAND OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3) (6.2.1): (5.34)(7.2.1)

13.4.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

13.4.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

13.4.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

13.4.2.4. THE LOCATION OF THE SWPPP.

13.4.3. ALL INFORMATION DESCRIBED IN SECTION 13.4.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

13.5. NOTICE OF TERMINATION (8.0) (9.0)

13.5.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, THE CITY OF LAKELAND WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC FIELD OFFICE.

13.5.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE

13.5.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND

13.5.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND

13.5.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND

13.5.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND

13.5.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND

13.5.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND

13.5.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

13.6. RETENTION OF RECORDS (6.2) (7.1)

THE CITY OF LAKELAND WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

14. **SITE WIDE/PRIMARY PERMITTEE CERTIFICATION** (7.7.5) (8.7.5)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED BY ME, OR UNDER MY DIRECTION OR SUPERVISION. THE SUBMITTED INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

Emily Harrell

AUTHORIZED CITY OF LAKELAND SIGNATURE (3.3.1) (5.3.3)

Emily Harrell

PRINTED NAME

City Engineer

TITLE

12/30/2019

DATE

15. **SECONDARY PERMITTEE (OPERATOR) CERTIFICATION** (7.7.6) (8.7.6)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ONSITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED SECONDARY PERMITTEE (OPERATOR) SIGNATURE (3.3.1) (5.3.1)

PRINTED NAME

TITLE

DATE

16. **ENVIRONMENTAL PERMITS** (9.0)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT **(TO BE COMPLETED AT THE ENVIRONMENTAL PRECONSTRUCTION MEETING BY THE CITY OF LAKELAND OR THEIR DULY AUTHORIZED REPRESENTATIVE)**:

ENVIRONMENTAL PERMITS			
PERMIT	**YES OR NO**	**PERMIT OR TRACKING NO.**	**EXPIRATION DATE***
TDEC ARAP	YES	NRS19.119	09/26/2023
CORPS OF ENGINEERS (USACE)	YES	MVM2018358	3/14/2026
TVA 26A	NO		
TDEC CGP	YES	TNR154887	ISSUED 1/17/2020 EXPIRATION UPON NOT
OTHER:	NO		

*THE CITY OF LAKELAND MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

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CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

DATE | BY | REVISION | NO.

PROJECT NO.: 77202-00
CAD FILE: N/A
ENGR./ARCH.: NMC
DESIGN BY: NMC
DRAWN BY: NMC
CHECKED BY:
DATE:

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

DRAWING NO: SWPPP-7

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OUTFALL TABLE (3.5.1.d, 5.4.1.g) (5.5.1.c, 6.4.1.e, 6.4.1.f)

EPSC STAGE	OUTFALL LABEL	APPROXIMATE STATION	SLOPE (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE	COMMENTS
1, 2, 3	1	101+00	3.0	0.01	0.01	0.01	NO	SCOTT'S CREEK	
1, 2, 3	2	107+50	3.3	3.35	3.35	3.35	NO	SCOTT'S CREEK	
1, 2, 3	3	123+30	1.3	3.83	3.83	3.83	NO	WWC-1	
1, 2, 3	4	123+60	<1.0	4.65	4.65	4.65	NO	WWC-1	
1, 2, 3	5	136+20	1.0	2.42	2.42	2.42	NO	STR-1	
1, 2, 3	6	602+02	2.0	0.07	0.07	0.07	NO	STR-1	REVISED STATION NUMBER
1, 2, 3	7	151+50	1.5	28.84	28.84	28.84	YES. SEE SECTION 4.3.5	WTL-2	
1, 2, 3	8	175+10	3.8	5.64	5.64	5.64	YES. SEE SECTION 4.3.5	STR-2	
1, 2, 3	9	179+30	<1.0	1.46	1.46	1.46	NO	STR-2	SHIFTED OUTFALL – ADJUSTED DA
1, 2, 3	10	184+10	1.8	23.70	23.70	23.70	YES. SEE SECTION 4.3.5	STR-2	SHIFTED OUTFALL – ADJUSTED DA
1, 2, 3	11	186+10	<1.0	4.93	4.93	2.36	NO	STR-2	SHIFTED OUTFALL – ADJUSTED DA
1, 2, 3	12	193+22	5.3	2.68	2.69	2.68	NO	CLEAR CREEK	REVISED STATION NUMBER ADJUSTED DA
1, 2, 3	13	195+25	6.8	2.03	2.03	2.03	NO	CLEAR CREEK	REVISED STATION NUMBER
1, 2, 3	14	199+74	2.6	9.05	9.05	9.05	YES. SEE SECTION 4.3.5	WWC-5	REVISED STATION NUMBER
1, 2, 3	15	205+70	3.6	6.83	6.83	6.83	YES. SEE SECTION 4.3.5	CLEAR CREEK	REVISED STATION NUMBER
1, 2, 3	16	211+10	4.7	7.11	7.11	7.11	YES. SEE SECTION 4.3.5	CLEAR CREEK	REVISED STATION NUMBER
1, 2, 3	17	214+70	6.9	1.35	1.35	1.35	NO	CLEAR CREEK	REVISED STATION NUMBER
1, 2, 3	18	216+25	3.0	26.52	26.52	26.52	YES. SEE SECTION 4.3.5	CLEAR CREEK	REVISED STATION NUMBER
1, 2, 3	19	218+57	5.8	3.40	3.40	3.40	NO	CLEAR CREEK	REVISED STATION NUMBER
1, 2, 3	20	224+60	2.5	27.84	27.84	27.84	YES. SEE SECTION 4.3.5	WTL-4	REVISED STATION NUMBER
1, 2, 3	21	233+36	3.4	10.80	10.80	10.80	YES. SEE SECTION 4.3.5	WTL-5	REVISED STATION NUMBER
1, 2, 3	22	238+75	1.7	1.83	1.83	1.83	NO	STR-3	REVISED STATION NUMBER
1, 2, 3	23	244+26	1.9	15.97	15.97	15.97	YES. SEE SECTION 4.3.5	WTL-6	REVISED STATION NUMBER
1, 2, 3	24	253+45	1.1	1.68	1.68	1.68	NO	STR-4	REVISED STATION NUMBER
1, 2, 3	25	257+55	2.4	0.97	0.97	0.97	NO	STR-4	REVISED STATION NUMBER
1, 2, 3	26	258+73	1.4	0.52	0.52	0.52	NO	STR-4	REVISED STATION NUMBER
1, 2, 3	27	259+48	2.3	1.29	1.29	1.29	NO	STR-4	REVISED STATION NUMBER
1, 2, 3	28	4+60	<1.0	2.14	2.14	2.14	NO	STR-4	
1, 2, 3	29	5+00	1.2	9.97	9.97	9.97	YES. SEE SECTION 4.3.5	STR-4	
1, 2, 3	30	22+00	<1.0	0.15	0.15	0.15	NO	STR-3	
1, 2, 3	31	27+30	<1.0	0.74	0.74	0.74	NO	STR-4	
1, 2, 3	32	27+30	2.8	31.19	31.19	31.19	YES. SEE SECTION 4.3.5	STR-4	EX & NEW 36 IN PIPES TO ACT AS PIPE DIVERSION
1, 2, 3	33	39+12	<1.0	0.69	0.69	0.69	NO	STR-4	CORRECTED STATION NUMBER
1, 2, 3	34	38+88	<1.0	2.85	2.85	2.85	NO	STR-4	CORRECTED STATION NUMBER
1, 2, 3	35	39+27	2.2	38.56	38.56	38.56	YES. SEE SECTION 4.3.5	STR-4	EX 36 IN STEEL PIPE TO REMAIN TO ACT AS PIPE DIVERSION CORRECTED STATION NUMBER
1, 2, 3	36	512+00	2.5	1.30	1.30	1.30	NO	STR-2	CORRECTED STATION NUMBER

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DANIEL C. VERDELL — REGISTERED PROFESSIONAL ENGINEER — STATE OF TENNESSEE — 115 — 10/18/2022

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE

PROJECT NO.:	77202-00
CAD FILE:	N/A
ENGR./ARCH.:	NMC
DESIGN BY:	NMC
DRAWN BY:	NMC
CHECKED BY:	
DATE:	

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

DRAWING NO.
SWPPP– 8

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