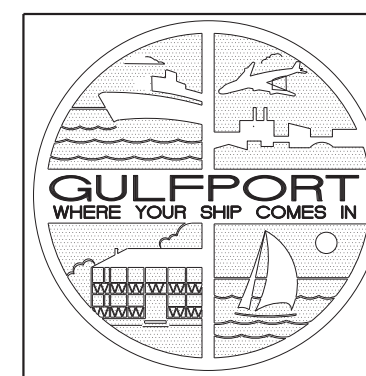


PLANS FOR U.S. HIGHWAY 49 AT 18TH STREET DRAINAGE IMPROVEMENTS GULFPORT, MISSISSIPPI

SEPTEMBER 2020



ENGINEERING DEPARTMENT
4050 HEWES AVENUE
GULFPORT, MS 39507
(228) 868-5815



DIRECTOR OF ENGINEERING
ROBERT K. RIEMANN, P.E.

PERMITS ACQUIRED

MDOH	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> N/A
MDEQ	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
MDMR	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
MDOT	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
USACE	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A

SHEET INDEX

DESCRIPTION	WK. NO.	SHEET NO.
TITLE & INDEX	TL-1	1
GENERAL NOTES & LEGEND	GN-01 to GN-03	2-4
SUMMARY OF QUANTITIES	SQ-1	5
ESTIMATED QUANTITIES	EQ-1 to EQ-2	6-7
LAYOUT	LY-01	8
TRAFFIC CONTROL	TCP-1 to TCP-3	9-11
PLAN & PROFILES	PP-1 to PP-7	12-18
GEOMETRIC	GEO-1	19
EROSION CONTROL PLAN	SP-1 to SP-4	20-23
MISC. DETAILS	DET-1 to DET-11	24-34

BILLY HEWES,
Mayor

KENNETH L. CASEY, SR., Councilman Ward 1 - RON ROLAND, Councilman Ward 2 - ELLA HOLMES-HINES, Councilwoman Ward 3 - F.B. "RUSTY" WALKER, IV, Councilman Ward 4

MYLES SHARP, Councilman Ward 5 - ROBERT "R. LEE" FLOWERS, Councilman Ward 6 - CARA PUCHEU, Councilwoman Ward 7

GENERAL NOTES (CONTINUED)

UTILITIES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS BASED UPON THE BEST INFORMATION AVAILABLE TO THE ENGINEER, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE. THE ENGINEER CANNOT AND DOES NOT WARRANT THAT THE INFORMATION IS COMPLETE OR ACCURATE. THE CONTRACTOR SHALL PERFORM A PRELIMINARY INVESTIGATION TO DETERMINE EXACT LOCATION OF UTILITY LINES BEFORE EXCAVATION OPERATION AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATELY REPLACING OR REPAIRING AT HIS OWN EXPENSE ANY DAMAGED WATER LINES, APPURTENANCES; STORM DRAIN LINES AND APPURTENANCES; SANITARY SEWER LINES AND APPURTENANCES, DRAINAGE STRUCTURES; OR ANY OTHER EXISTING SERVICES OR OBSTRUCTIONS WHICH, IN THE OPINION OF THE CITY OR THE ENGINEER, WERE DAMAGED BY THE CONTRACTOR. THE CONTRACTOR SHALL HAVE ON HAND AT ALL TIMES THE NECESSARY FITTINGS AND ACCESSORIES NEEDED TO PERFORM AN EMERGENCY REPAIR ON ANY EXISTING WATER MAIN, SANITARY SEWER LINE, STORM DRAIN, FORCE MAIN, SERVICE, ETC. SHOULD THE MAIN (S) OR SERVICE (S) BE DAMAGED DURING THE CONSTRUCTION OF THIS PROJECT.
3. CONTRACTOR MUST KEEP THE WATER, SEWER, AND DRAINAGE SYSTEMS FUNCTIONAL AND ALL HOUSES IN SERVICE AT ALL TIMES UNLESS MINIMAL UTILITY OUTAGES ARE APPROVED BY THE CITY OR THE ENGINEER WITH A MINIMUM OF FIVE (5) CITY WORKING DAYS NOTICE. NO SERVICE SHALL BE LEFT OFF TO ANY PROPERTY OVERNIGHT.
4. ADJUSTMENTS TO GAS, TELEPHONE, TELEVISION CABLE, POWER APPURTENANCES AND OTHER UTILITIES SHALL BE MADE BY OTHERS, BUT SHALL BE COORDINATED BY THE CONTRACTOR.
5. THE WORK INCLUDED AS PART OF THIS PROJECT REQUIRES EXCAVATION IN THE IMMEDIATE VICINITY OF TRAFFIC AND ADJACENT PROPERTIES. THEREFORE, THE RISK OF A FAILURE OCCURRING DURING THE EXCAVATION REQUIRES THAT EXTREME CAUTION BE EXERCISED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE WHAT BRACING, SHORING OR GROUND SUPPORT SYSTEM THAT IS DEEMED NECESSARY TO PREVENT FAILURE AND TO PROTECT THE PERSONS WORKING NEAR THE EXCAVATION OR ANY STRUCTURE ADJACENT TO THE EXCAVATION. ALL COSTS FOR ANY PROTECTIVE MEASURES, INCLUDING THE MATERIALS AND LABOR FOR DESIGNING, DRAWING AND CONSTRUCTING THE FACILITY, SHALL BE INCLUDED IN THE PRICE BID FOR THE CONTRACT ITEMS. ALL TRENCHING DEEPER THAN 20' MUST BE DESIGNED BY AN ENGINEER.

UTILITIES (CONTINUED)

7. CONTRACTOR SHALL EXPLORE AHEAD (SURFACE AND SUBSURFACE) 200 FEET OF THE PIPE BEING LAID SO THAT NECESSARY ADJUSTMENTS CAN BE MADE IN THE ALIGNMENT OF THE PIPE IN CASE OF CONFLICTS WITH EXISTING STRUCTURES, UTILITIES, OR ANY OTHER KNOWN OR UNKNOWN OBSTRUCTION.

EROSION CONTROL

1. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH ALL MATERIALS AND PERFORM ALL WORK FOR THE PROPER INSTALLATION, MAINTENANCE AND REMOVAL OF ANY TEMPORARY EROSION CONTROL MEASURE(S) NECESSARY TO CONTROL SILTATION. IF THERE IS NO SEPARATE PAY ITEM FOR TEMPORARY EROSION CONTROL MEASURES, THE COST OF TEMPORARY EROSION CONTROL SHALL BE ABSORBED IN OTHER BID ITEMS.
2. CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCES AROUND THE PERIMETER OF ALL VEGETATED AREAS WHICH ARE DISTURBED AND SHALL PREVENT SILTATION OF ADJACENT DRAINAGE SYSTEMS AND CHANNELS WITH SILT FENCING. THE USE OF HAY BALES IS PROHIBITED. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROLS DURING THE ENTIRE COURSE OF THIS PROJECT PER ACCEPTABLE/APPROVED STORMWATER BEST MANAGEMENT PRACTICES. THE PLACEMENT OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) SHALL BE IN ACCORDANCE WITH THE MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY'S PLANNING AND DESIGN MANUAL FOR THE CONTROL OF EROSION, SEDIMENT AND STORMWATER.
3. SILT FENCES SHALL BE INSTALLED AND PROPERLY MAINTAINED AROUND ALL STOCKPILED MATERIALS.
4. ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY AND/OR EASEMENTS SHALL BE GRASSED PER THE SPECIFICATIONS. ACCEPTANCE SHALL BE BASED ON SATISFACTORY GROWTH AND COVERAGE OF SEED(S) PLANTED.
5. EXISTING VEGETATION SHALL BE MAINTAINED AND PROTECTED WHEREVER POSSIBLE.
6. WHERE APPLICABLE ALL CONSTRUCTION TRAFFIC SHALL ENTER/EXIT THE SITE THROUGH THE CONSTRUCTION ENTRANCE; A CONSTRUCTION ENTRANCE IS REQUIRED AT ALL ACCESS POINTS ON THE SITE.
7. TEMPORARY OR PERMANENT VEGETATIVE PRACTICES SHALL BE IMPLEMENTED WITHIN SEVEN CALENDAR DAYS WHEN A DISTURBED AREA WILL BE LEFT UNDISTURBED FOR THIRTY DAYS OR MORE.
8. TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL NOT BE REMOVED UNTIL PERMANENT EROSION CONTROLS ARE ESTABLISHED ON ALL DISTURBED AREAS. FINAL APPROVAL ON THE PROJECT WILL NOT BE MADE UNTIL ALL TEMPORARY EROSION CONTROLS ARE REMOVED AND PERMANENT EROSION CONTROLS ARE EFFECTIVELY ESTABLISHED.
9. ALL EQUIPMENT REPAIR AND MAINTENANCE SHALL BE DONE OFFSITE.

EROSION CONTROL (CONTINUED)

10. RECEPTACLES SHALL BE PROVIDED TO PROPERLY DISPOSE OF ALL TRASH AND WASTE. ALL CONSTRUCTION DEBRIS SHALL BE PICKED UP AT THE END OF EACH DAY AND SHALL BE REMOVED COMPLETELY FROM THE SITE AT THE END OF THE PROJECT.
11. SANITARY FACILITIES SHALL BE PROVIDED ON-SITE FOR ALL EMPLOYEES.
12. TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO THE START OF ANY WORK. IF IT WILL BE REQUIRED TO REMOVE THEM TEMPORARILY DUE TO CONSTRUCTION ACTIVITIES, ONCE THOSE ACTIVITIES ARE COMPLETED OR AT THE END OF THE WORK DAY, THE TEMPORARY CONTROLS SHALL BE REINSTALLED IMMEDIATELY.
13. ALL EROSION CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS.
14. ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE DEEMED NECESSARY IF THE CONTROLS FOUND IN THIS STORMWATER MANAGEMENT PLAN ARE FOUND TO BE INEFFECTIVE.
15. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM CONTROLS WHEN IT REACHES ONE-HALF (½) THE HEIGHT OF THE CONTROL. THE SEDIMENT SHALL BE PROPERLY DISPOSED OF SO AS NOT TO CAUSE SEDIMENTATION IN ANOTHER LOCATION.
16. EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED WEEKLY AND FOLLOWING ANY RAIN EVENT. NON-FUNCTIONING, INEFFECTIVE OR DAMAGED CONTROLS SHALL BE REPAIRED, REPLACED OR SUPPLEMENTED WITH FUNCTIONAL CONTROLS WITHIN 24 HOURS OF DISCOVERY.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ANY SEDIMENT THAT MIGRATES INTO THE STORM DRAIN SYSTEM.
18. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ANY SEDIMENT OR CONSTRUCTION DEBRIS THAT IS TRACKED ONTO ADJACENT PAVED AREAS. ADJACENT STREETS SHALL BE KEPT CLEAN THROUGHOUT CONSTRUCTION AND SHALL BE CLEANED WITH A STREET-SWEEPER OR SIMILAR TECHNIQUE IMMEDIATELY UPON DISCOVERY OF SEDIMENT. WASHING DOWN OF THE STREET OR ANY PAVED AREAS IS NOT ALLOWED.
19. ANY SEDIMENT THAT HAS MIGRATED OFFSITE WHETHER ONTO PUBLIC OR PRIVATE PROPERTY SHALL BE REMOVED IMMEDIATELY UPON DISCOVERY.

TRAFFIC/SIGNS

1. MAINTENANCE OF TRAFFIC SHALL INCLUDE ALL SIGNS, BARRICADES, PAVEMENT MARKINGS, WARNING LIGHTS, PERSONNEL, TRAFFIC CONTROL DEVICES, SUPERVISION, AND OTHER ITEMS CONCERNING TRAFFIC CONTROL. THERE SHALL BE NO OTHER PAYMENTS MADE FOR THIS WORK. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) AND THE ATTACHED TRAFFIC CONTROL PLAN.

<p style="text-align: center; margin: 0;">NOTICE TO DRAWING HOLDER</p> <p style="font-size: 8px; margin: 0;">NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.</p>	REVISIONS			DRAWING INFORMATION		<p style="margin: 0;">DRAINAGE IMPROVEMENTS ON 18TH STREET AT US49 TO BRICKYARD BAYOU</p> <p style="margin: 0;">CITY OF GULFPORT GULFPORT, MISSISSIPPI</p>		GENERAL NOTES									
	NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.: 00.14470.00			FILENAME: DETAILS.DGN	SCALE: NTS	SURVEYED BY: -----	DGSN: JLD	DATE: -----	DRAWN: JTD	DATE: -----	CHKD: JLD	DATE: -----	QA/QC: DLS

GENERAL NOTES (CONTINUED)

TRAFFIC/SIGNS (CONTINUED)

2. CONTRACTOR SHALL INVENTORY ALL EXISTING SIGNS AND LOCATION WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL REMOVE, SAFELY STORE TO PREVENT DAMAGE AND REINSTALL ANY STREET SIGNS IMPACTED BY THE PROJECT. ONLY SIGNS DISTURBED DURING CONSTRUCTION SHALL BE REMOVED. ANY SIGNS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL SIGNS REPLACED MUST CONFORM TO CITY SPECIFICATIONS. NO SEPARATE PAYMENT SHALL BE MADE FOR THE REMOVAL AND INSTALLATION OF EXISTING SIGNS.
3. IF CONTRACTOR FAILS TO MAINTAIN TRAFFIC CONTROL AS PRESCRIBED FOR TYPE OF CONSTRUCTION, THE CITY MAY WITHHOLD PAYMENT OF ALL OR ANY RECENT PAY REQUESTS UNTIL TRAFFIC CONTROL IS IN COMPLIANCE WITH PLANS.
4. ALL CONSTRUCTION SIGNS SHALL BE IN PLACE BEFORE THE START OF ANY CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED AND REMAIN IN PLACE FOR THE LIFE OF THE PROJECT.
5. THE LOCATION AND SPACING OF SIGNS SHOWN ON THE TRAFFIC CONTROL PLANS ARE APPROXIMATE AND MAY BE ADJUSTED AS NECESSARY TO FIT FIELD CONDITIONS OR AS APPROVED BY THE CITY ENGINEER, OR HIS AUTHORIZED REPRESENTATIVE.
6. REPLACEMENT OF LOST OR DAMAGED CONSTRUCTION SIGNS OR DEVICES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. LOST OR DAMAGED SIGNS SHALL BE REPLACED IMMEDIATELY. NO PAYMENT SHALL BE MADE FOR SUCH REPLACEMENT OR REPAIR.

VEGETATION

1. SHRUBS, TREES, AND OTHER VEGETATION TO BE DISTURBED SHALL BE CAREFULLY REMOVED AND OFFERED TO THE PROPERTY OWNERS. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR REPLANTING THE VEGETATION. ALL UNWANTED SHRUBBERY SHALL BE PROPERLY DISPOSED OF OFF THE PROJECT SITE. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE COST OF THE PROJECT AND SHALL NOT BE MEASURED FOR SEPARATE PAYMENT.
2. REMOVE ONLY TREES WITHIN THE LIMITS OF THE WORK NOTED ON THE DRAWINGS TO BE REMOVED AND THAT ARE NECESSARY FOR CONSTRUCTION OF THE PROJECT. NO TREES PROTECTED BY LOCAL ORDINANCE SHALL BE REMOVED, TRIMMED, OR DAMAGED, INCLUDING ROOTS, UNLESS SPECIFICALLY PERMITTED IN WRITING BY THE CITY. ANY DAMAGES TO ANY TREE CAUSED BY THE CONTRACTOR SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ANY RESULTING PENALTIES OR REQUIREMENTS IMPOSED BY THE CITY SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.

MISCELLANEOUS

1. FENCES IN CONFLICT WITH NEW CONSTRUCTION SHALL BE RELOCATED TO THE EDGE OF THE RIGHT-OF-WAY AND/ OR EASEMENT LINE BY THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE NEW FENCE.
2. FENCES WHICH ARE REMOVED DURING CONSTRUCTION SHALL BE REPLACED WITH A NEW FENCE IN A TIMELY MANNER AS SHOWN ON THE DRAWINGS.
3. CONCRETE FOR INSTALLATION OF FENCE POSTS ON PRIVACY FENCES SHALL BE AN ABSORBED COST.

MISCELLANEOUS (CONTINUED)

4. SPRINKLER SYSTEM REMOVAL AND REPLACEMENT SHALL BE AN ABSORBED COST.
5. THE CONTRACTOR SHALL RELOCATE ANY MAILBOXES AND SIGNS NECESSARY TO COMPLETE THIS WORK. THIS INCLUDES ALL DECORATIVE (E.G. BRICK, STONE, WOOD, ETC.) MAILBOXES. REMOVAL, STORAGE AND REPLACEMENT OF MAILBOXES AND SIGNS ARE NOT SEPARATE PAY ITEMS AND SHALL BE INCLUDED IN THE COST OF THE PROJECT. ANY MAILBOXES OR SIGNS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL BE AWARE THAT THERE MAY BE EXISTING RETAINING WALLS LOCATED THROUGHOUT THE PROJECT AREA THAT ARE TO REMAIN AS THEY CURRENTLY EXIST. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND/ OR REPAIR/ REPLACE ANY PORTION OF THESE EXISTING RETAINING WALL (S) THAT ARE DAMAGED DURING CONSTRUCTION OPERATIONS. THE WALL SHALL BE REPLACED IN KIND TO MATCH EXISTING AS CLOSELY AS POSSIBLE. NO SEPARATE PAYMENT SHALL BE PROVIDED FOR THIS WORK. IT SHOULD BE NOTED THAT THERE MAY BE INSTANCES WHERE AN EXISTING RETAINING WALL MUST BE DISTURBED DURING CONSTRUCTION. THE LIMIT (S) OF THIS DISTURBANCE WILL BE CLEARLY DELINEATED ON THE DRAWINGS AND NECESSARY PAY ITEMS WILL BE PROVIDED. AS NOTED ABOVE, THESE WALLS SHALL BE REPLACED IN KIND TO MATCH ITS PREVIOUS CONSTRUCTION TO THE EXTENT REASONABLE. IF NO SEPARATE PAY ITEM IS PROVIDED IN THE PLANS FOR RETAINING WALL REPLACEMENT/ REPAIR THEN THE WORK IS CONSIDERED TO BE INCLUDED IN THE COST OF THE PROJECT.
7. CONTRACTOR SHALL DISPOSE OFF-SITE ALL MISCELLANEOUS TRASH, DEBRIS, AND DAMAGED VEGETATION FROM ALL AREAS WITHIN THE LIMITS OF WORK. ALL SUCH WORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
8. STREET SWEEPING BY THE CONTRACTOR SHALL BE COMPLETED AS NECESSARY OR AS DIRECTED BY THE CITY OR THE ENGINEER. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK; IT SHALL BE INCLUDED IN THE COST OF THE PROJECT.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING OR REPAIRING AT HIS OWN EXPENSE ANY DAMAGES DONE TO PUBLIC RIGHT-OF-WAYS OR PRIVATE PROPERTY, WHICH WAS DAMAGED, IN THE OPINION OF THE CITY ENGINEER, DUE TO THE NEGLIGENCE OF THE CONTRACTOR.
10. THE OWNER AND THE ENGINEER SHALL BE CONTACTED A MINIMUM OF 72 HOURS IN ADVANCE OF ANY WORK WITHIN THE CITY'S RIGHT-OF-WAY. ONE LANE OF TRAFFIC WITHIN CITY RIGHT-OF-WAYS SHALL REMAIN OPEN AT ALL TIMES FOR EMERGENCY VEHICLES.
11. ALL SOILS DISTURBED AROUND MANHOLES SHALL BE COMPACTED BACK TO 95% ASTM D1557.

MISCELLANEOUS (CONTINUED)

12. IF EXISTING MATERIAL IS USED FOR BACKFILL, THERE SHALL BE NO ADDITIONAL PAYMENT FOR EXCAVATION AND BACKFILL. IF EXISTING MATERIAL IS UNSUITABLE FOR BACKFILL, BORROW MATERIAL SHALL BE USED. APPROVED PLACEMENT OF BORROW SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE. THE EXCAVATION AND DISPOSAL OF UNSUITABLE MATERIAL SHALL BE MEASURED AND PAID FOR AS EXCESS EXCAVATION. BORROW MATERIAL SHALL BE B3 MATERIAL. A MECHANICAL ANALYSIS (AASHTO T88), PLASTICITY INDEX ANALYSIS (AASHTO T91), MOISTURE DENSITY CURVE ANALYSIS (AASHTO T180 OR ASTM D1557), AND A CLASSIFICATION IN ACCORDANCE WITH AASHTO M145 SOIL CLASSIFICATION SYSTEM SHALL BE REQUIRED TO VERIFY B5 MATERIAL PROPERTIES.
13. CONTRACTOR TO STOCKPILE STRIPPING AND UNCLASSIFIED EXCAVATION THAT IS SUITABLE FOR PLANTING MATERIAL. (THERE IS NO SEPARATE PAY ITEM FOR INTERIM STOCKPILING OF MATERIAL).
14. THE CONTRACTOR SHALL ONLY BE PAID FOR VOLUME (FM) OF UTILITY LINE EMBEDMENT MATERIAL PER THE AUTHORIZED TRENCH WIDTH OF THE UTILITY PIPE OUTSIDE DIAMETER PLUS 2 FEET PER THE UTILITY EMBEDMENT DETAIL(S).
15. CONTRACTOR IS REQUIRED TO FIELD SURVEY AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE ORDERING OR CUTTING MATERIALS. ELEVATIONS AND DIMENSIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY AND ALL ELEVATION AND DIMENSION DISCREPANCIES FOUND IN THE FIELD SURVEY. THE CONTRACTOR IS REQUIRED TO RECORD, MAINTAIN AND MAKE AVAILABLE ALL FIELD SURVEY NOTES TO THE ENGINEER UPON REQUEST.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: -----
				DSGN: JLD DATE: -----
				DRWN: JTD DATE: -----
				CHKD: JLD DATE: -----
				QA/QC: DLS DATE: -----

DRAINAGE IMPROVEMENTS ON 18TH STREET AT US49 TO BRICKYARD BAYOU

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



GENERAL NOTES

WORKING NUMBER:

GN-03

DRAWING NUMBER:

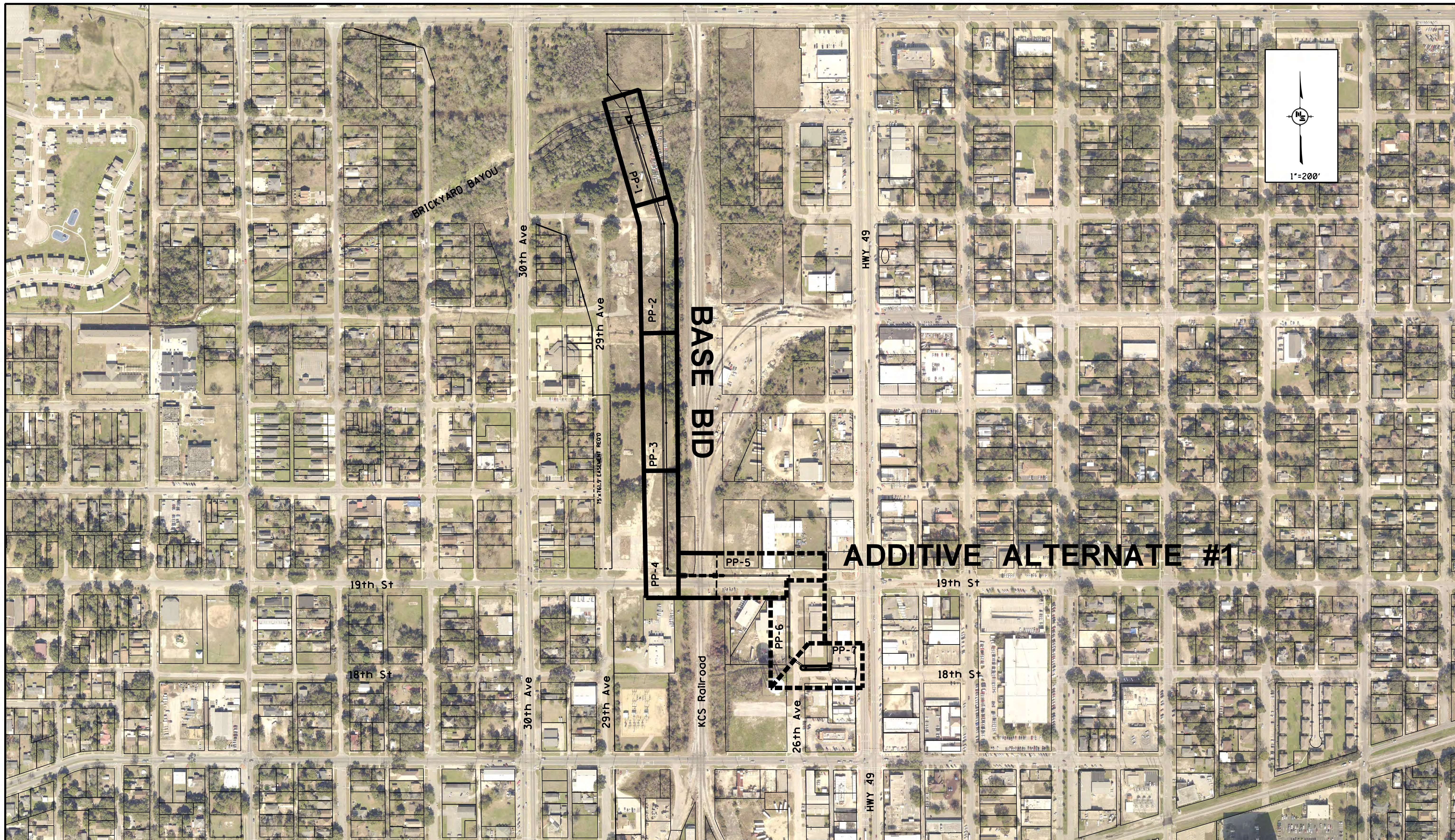
04

REMOVAL ITEMS

WORK NUMBER	STATION TO STATION		CONCRETE							ASPHALT			FENCE ALL TYPES	PIPES ALL TYPES	REMARKS
			PAVEMENT	DR'WYS.	PAVED DITCH	MEDIAN & ISLAND PAVEMENT	SLOPE PAVING	SIDEWALK	STRUCTURE	CURBS	PAVEMENT	DR'WYS.			
PP-2	5+75	6+15										111 SY			
PP-2	6+35	7+10										110 SY			
PP-2	6+55	6+95							22 SY						
PP-2	8+38	8+39											30 LF		
PP-2	10+20	10+80											70 LF		
PP-3	10+80	13+53											380 LF		
PP-3	16+60	16+80											50 LF		
PP-4	16+80	17+23											60 LF		
PP-4	19+50	21+45										583 SY			
PP-5	25+25	25+50										47 SY			
PP-5	25+22	25+50										47 SY			
PP-6	27+15	27+70										102 SY			
PP-6	28+08	29+40											462 SY		
PP-6	29+70	30+10		80 SY											
PP-6	30+45	31+65										102 SY			
PP-7	32+50	33+70										320 SY			
GEO-1	32+55	33+52												193 LF	
GEO-1	33+57	33+63												12 LF	
GEO-1	33+54	33+54							1 EA						
GEO-1	33+63	33+63							1 EA						
GEO-1	33+60									75 LF					
GEO-1	33+63									35 LF					
GEO-1	33+60	33+63												40 LF	
GEO-1	33+59	33+59							38 SY	1 EA					
GEO-1	33+63								15 SY						

ADDITIVE ALTERNATE #1

NOTICE TO DRAWING HOLDER <small>NEEL-SCHAFFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.</small>	REVISIONS	DRAWING INFORMATION	DRAINAGE IMPROVEMENTS ON 18TH STREET AT US49 TO BRICKYARD BAYOU CITY OF GULFPORT GULFPORT, MISSISSIPPI		REMOVAL ITEMS																																		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NO.</th><th>DATE</th><th>BY</th><th>DESCRIPTION</th></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	NO.			DATE	BY	DESCRIPTION																	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2">N-S PROJECT NO.: 00.14470.00</td></tr> <tr><td colspan="2">FILENAME: DETAILS.DGN</td></tr> <tr><td colspan="2">SCALE: NTS</td></tr> <tr><td colspan="2">SURVEYED BY:</td></tr> <tr><td>DSGN: JLD</td><td>DATE:</td></tr> <tr><td>DRWN: JTD</td><td>DATE:</td></tr> <tr><td>CHKD: JLD</td><td>DATE:</td></tr> <tr><td>QA/QC: DLS</td><td>DATE:</td></tr> </table>	N-S PROJECT NO.: 00.14470.00		FILENAME: DETAILS.DGN		SCALE: NTS		SURVEYED BY:		DSGN: JLD	DATE:	DRWN: JTD	DATE:	CHKD: JLD	DATE:	QA/QC: DLS
NO.	DATE	BY	DESCRIPTION																																				
N-S PROJECT NO.: 00.14470.00																																							
FILENAME: DETAILS.DGN																																							
SCALE: NTS																																							
SURVEYED BY:																																							
DSGN: JLD	DATE:																																						
DRWN: JTD	DATE:																																						
CHKD: JLD	DATE:																																						
QA/QC: DLS	DATE:																																						



NOTICE TO DRAWING HOLDER

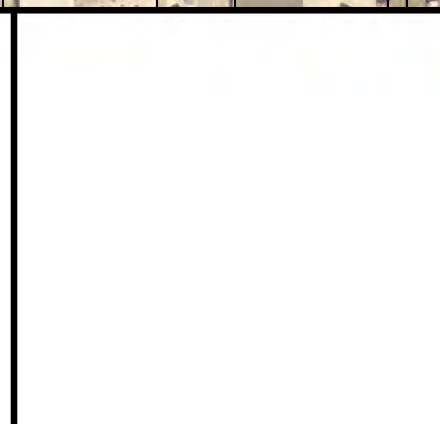
NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

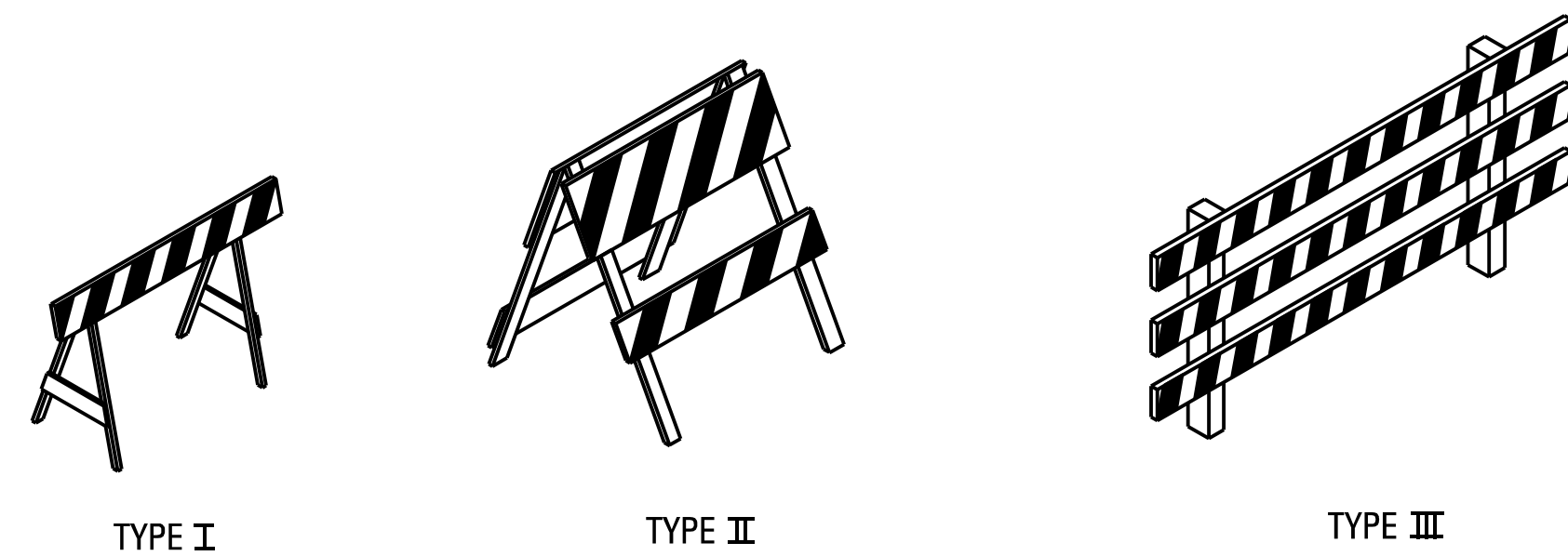
DRAWING INFORMATION	
N-S PROJECT NO.:	11940
FILENAME:	LAYOUT.DGN
SCALE:	1"=200'
SURVEYED BY:	NA
DSGN:	JLD DATE: 9/2018
DRWN:	JTD DATE: 9/2018
CHKD:	DLS DATE: 9/2018
QA/QC:	DLS DATE: 9/2018

**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
HARRISON COUNTY, MISSISSIPPI

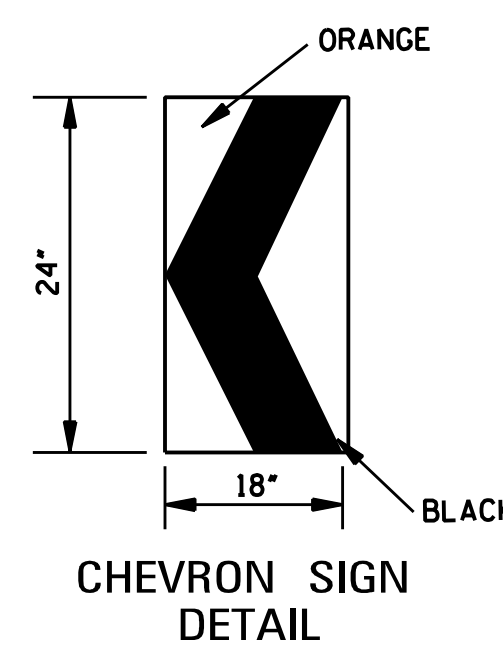


PHASE LAYOUT	
WORKING NUMBER:	DRAWING NUMBER:
LY-01	08

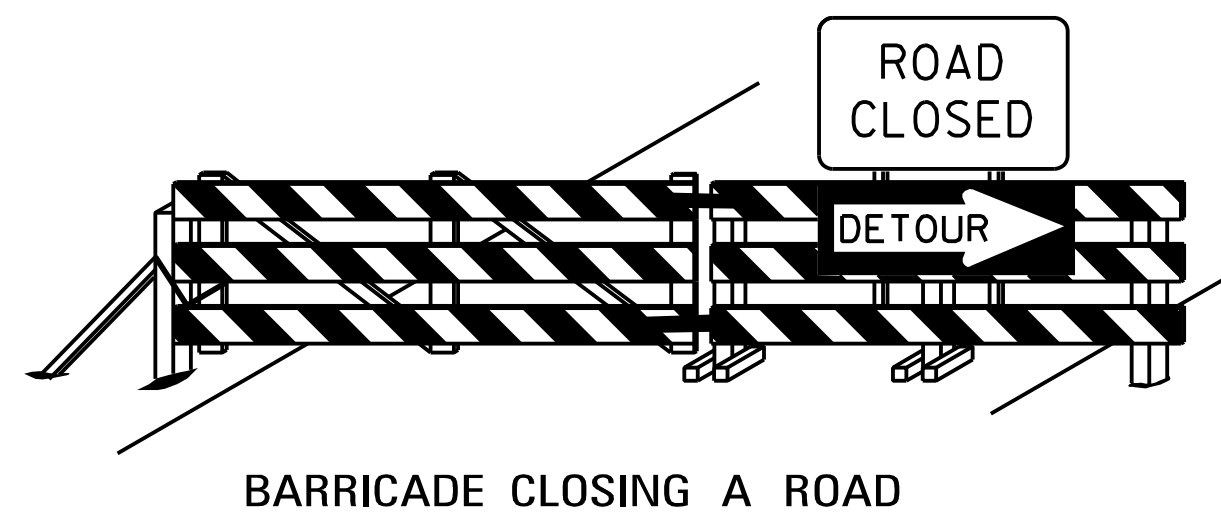


STANDARD BARRICADES

1. A TYPE I BARRICADE CONSISTS OF ONE (1) HORIZONTAL RAIL SUPPORTED BY A DEMOUNTABLE FRAME OR A LIGHT "A" FRAME. A TYPE I BARRICADE NORMALLY WOULD BE USED ON CONVENTIONAL ROADS OR URBAN STREETS AND ARTERIALS.
2. A TYPE II BARRICADE CONSISTS OF TWO (2) HORIZONTAL RAILS ON A LIGHT "A" FRAME. TYPE II BARRICADES ARE INTENDED FOR USE ON EXPRESSWAYS AND FREEWAYS AND OTHER HIGH-SPEED ROADWAYS.
3. TYPE I AND TYPE II BARRICADES ARE INTENDED FOR USE WHERE THE HAZARD IS RELATIVELY SMALL AS, FOR EXAMPLE, ON CITY STREETS, OR FOR THE MORE OR LESS CONTINUOUS DELIMITING OF A RESTRICTED ROADWAY, OR FOR TEMPORARY DAYTIME USE.
4. A TYPE III BARRICADE CONSISTS OF THREE (3) HORIZONTAL RAILS SUPPORTED BY FIXED POSTS, A RIGID SKID, A HEAVY DEMOUNTABLE FRAME OR A HEAVY, HINGED "A" FRAME.
5. TYPE III BARRICADES ARE INTENDED FOR USE ON CONSTRUCTION AND MAINTENANCE PROJECTS AS WING BARRICADES AND AT ROAD CLOSURES, WHERE THEY MUST REMAIN IN PLACE FOR EXTENDED PERIODS.
6. THE MARKING FOR BARRICADE RAILS SHALL BE ORANGE AND WHITE (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS).
7. DO NOT PLACE SANDBAGS OR OTHER DEVICES TO PROVIDE MASS ON THE BOTTOM RAIL THAT WILL BLOCK VIEW OR RAIL FACE.
8. FOR ADDITIONAL INFORMATION OR DETAILS, SEE MUTCD, LATEST EDITION.



1. A CHEVRON SIGN CONSISTS OF A BLACK CHEVRON TYPE MARKING ON AN ORANGE BACKGROUND AND SHALL POINT IN THE DIRECTION OF TRAFFIC FLOW.
2. THE CHEVRON SIGN SHALL BE MOUNTED ON FIXED POST OR RIGID SKID.
3. CHEVRON SIGNS MAY BE USED TO SUPPLEMENT OTHER STANDARD DEVICES WHERE ONE OR MORE LANES ARE CLOSED FOR CONSTRUCTION OR MAINTENANCE. THEY SHALL BE PLACED APPROXIMATELY 2'-0" BEHIND THE LANE TRANSITION STRIPE.

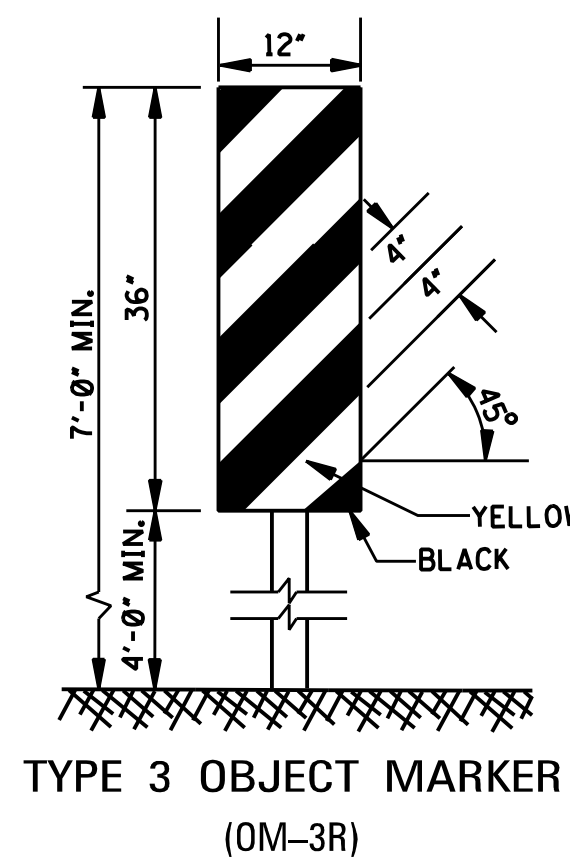


BARRICADE CLOSING A ROAD

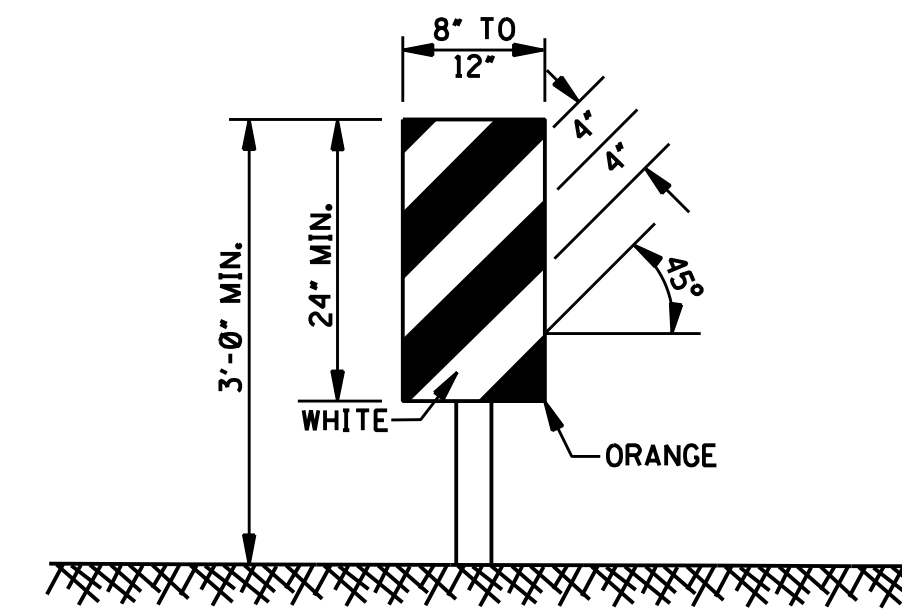
BARRICADE CHARACTERISTICS

	I	II	III
WIDTH OF RAIL **	8" MIN. - 12" MAX.	8" MIN. - 12" MAX.	8" MIN. - 12" MAX.
LENGTH OF RAIL **	24" MIN.	24" MIN.	48" MIN.
WIDTH OF STRIPE *	6"	6"	6"
HEIGHT	36" MIN.	36" MIN.	60" MIN.
NUMBER OF REFLECTORIZED RAIL FACES	2 (ONE EACH DIRECTION)	4 (TWO EACH DIRECTION)	3 IF FACING TRAFFIC IN ONE DIRECTION 6 IF FACING TRAFFIC IN TWO DIRECTIONS
TYPE OF FRAME	LIGHT	LIGHT "A" FRAME	POST OR SKID

- * 1. FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.
- ** 2. BARRICADES INTENDED FOR USE ON EXPRESSWAYS, FREEWAYS AND OTHER HIGH SPEED ROADWAYS, SHALL HAVE A MINIMUM OF 270 in² OF REFLECTIVE AREA FACING TRAFFIC.



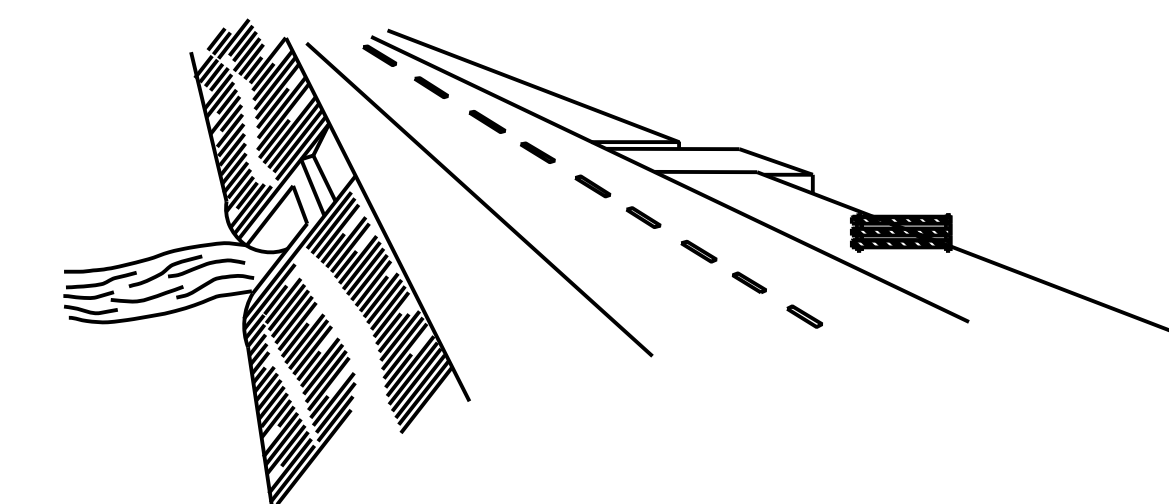
1. TYPE 3 OBJECT MARKERS SHALL BE USED AT ALL EXPOSED BRIDGE ABUTMENTS AND AT OTHER LOCATIONS AS DEEMED NECESSARY BY THE ENGINEER.
2. THE OM-3R IS SHOWN. THE OM-3L IS SIMILAR EXCEPT THE STRIPES SLOPE DOWNWARD FROM THE UPPER LEFT SIDE TO THE LOWER RIGHT SIDE AND SHALL BE PLACED ON THE LEFT SIDE OF THE OBJECT.
3. THE INSIDE EDGE OF THE MARKER SHALL BE IN LINE WITH THE INNER EDGE OF THE OBSTRUCTION.



VERTICAL PANEL

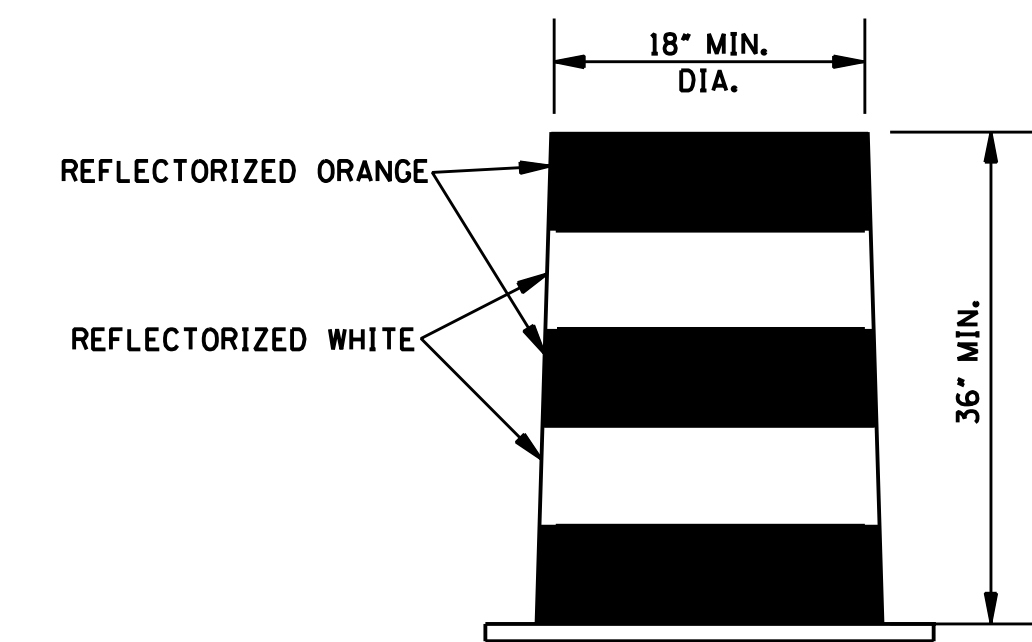
1. VERTICAL PANELS CONSIST OF AT LEAST ONE PANEL 8" TO 12" IN WIDTH AND A MINIMUM OF 24" IN HEIGHT.
2. THE DIAGONAL STRIPES SHALL SLOPE DOWNWARD IN THE DIRECTION THAT TRAFFIC IS TO PASS THE PANEL. THE PANELS SHALL BE MOUNTED WITH THE TOP A MINIMUM OF 36" ABOVE THE ROADWAY ON A SINGLE LIGHTMASS POST.
3. VERTICAL PANELS USED ON EXPRESSWAYS, FREEWAYS AND OTHER HIGH-SPEED ROADWAYS SHALL HAVE A MINIMUM OF 270 in² OF RETROREFLECTIVE AREA FACING TRAFFIC.
4. FOR TWO-WAY TRAFFIC OPERATIONS, BACK-TO-BACK PANELS SHALL BE USED.

- GENERAL NOTES:
1. MARKINGS ON ALL DEVICES SHOWN ON THIS SHEET SHALL BE HIGH INTENSITY REFLECTIVE SHEETING.
 2. THE TRAFFIC CONTROL PLAN WILL LIST THE VARIOUS TRAFFIC CONTROL DEVICES REQUIRED FOR EACH PROJECT.



WING BARRICADES

1. WING BARRICADES ARE TYPE III BARRICADES ERECTED ON THE SHOULDER ON ONE OR BOTH SIDES OF THE PAVEMENT TO GIVE THE SENSATION OF A NARROWING OR RESTRICTED ROADWAY. WING BARRICADES MAY BE USED AS A MOUNTING FOR THE ADVANCE WARNING SIGNS OR FLASHERS.
2. WING BARRICADES SHOULD BE USED:
 - A. IN ADVANCE OF A CONSTRUCTION PROJECT EVEN WHEN NO PART OF THE ROADWAY IS ACTUALLY CLOSED.
 - B. IN ADVANCE OF ALL BRIDGE OR CULVERT WIDENING OPERATIONS.



PLASTIC DRUM STRIPING DETAIL

1. PLASTIC DRUMS SHALL BE ON END AND USED AS AN EXPEDIENT METHOD FOR TRAFFIC CHANNELIZATION. THE COLOR AND MARKING OF DRUMS SHALL BE CONSISTENT WITH MARKING STANDARDS FOR BARRICADE. THE PREDOMINANT COLOR ON DRUMS SHALL BE ORANGE WITH FOUR (4) REFLECTORIZED, HORIZONTAL, CIRCUMFERENTIAL STRIPES (2 ORANGE & 2 WHITE) 6" WIDE.
2. DRUMS SHOULD NEVER BE PLACED IN THE ROADWAY WITHOUT WARNING SIGNS.
3. WHERE PRACTICAL PLASTIC DRUMS SHALL BE PLACED NO CLOSER THAN 3'-0" FROM THE EDGE OF TRAVELED LANE.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: DLS DATE: _____

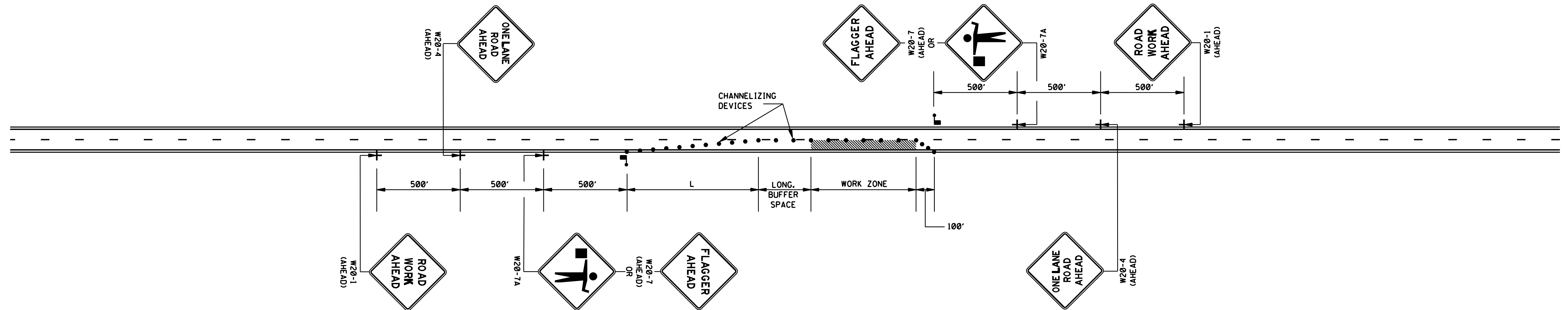
DRAINAGE IMPROVEMENTS ON 18TH STREET AT US49 TO BRICKYARD BAYOU

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



TRAFFIC CONTROL DETAIL

WORKING NUMBER: TCP-1
DRAWING NUMBER: 09



- LEGEND
- FLAGGER
 - CHANNELIZING DEVICES

GENERAL NOTES:

1. THE LOCATION OF CHANNELIZING DEVICES AND THE WORK AREA LAYOUT SHALL BE BASED ON THE CRITERIA IN THE FOLLOWING TABLE:

POSTED SPEED AND/OR DESIGN SPEED	MAXIMUM CHANNELIZING DEVICE SPACING (ft)		MINIMUM LONGITUDINAL BUFFER SPACE (ft)	TAPER † RATES
	TAPER	ALONG LANE LINE & WORK ZONE		
mph				
≤40	40	80	170	27:1
45	45	90	220	45:1
50	50	100	280	50:1
55	55	110	335	55:1
60	60	120	415	60:1
65	65	130	485	65:1
70	70	140	575	70:1

† NOTE: TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
 $L = WS$ FOR SPEEDS OF 45 mph OR GREATER
 $L = WS^2/60$ FOR SPEEDS OF 40 mph OR LESS
 WHERE: L = MINIMUM LENGTH OF TAPER IN FEET
 W = WIDTH OF OFFSET (USUALLY LANE WIDTH) IN FEET
 S = DESIGN SPEED OR 85TH PERCENTILE SPEED IN MILES PER HOUR

2. ALL CHANNELIZING DEVICES SHALL BE A MINIMUM OF 24" IN HEIGHT.
3. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.
4. DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHALL BE A MINIMUM OF 48" x 48".
5. WHEN THERE IS NO EXISTING HAZARD OR AT THE END OF THE WORK DAY, ALL SIGNS SHALL BE COVERED OR REMOVED AND ALL CHANNELIZING DEVICES SHALL BE MOVED TO THE SHOULDER EDGE.
6. WHERE THE WORK ZONE IS STATIONARY, THE W20-7 (500 FT.) SIGN OR THE W20-7A SIGN TOGETHER WITH THE W20-7 (500 FT.) SUPPLEMENTAL PLATE SHOULD BE USED TO INDICATE THE DISTANCE TO THE FLAGGER.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: DLS DATE: _____

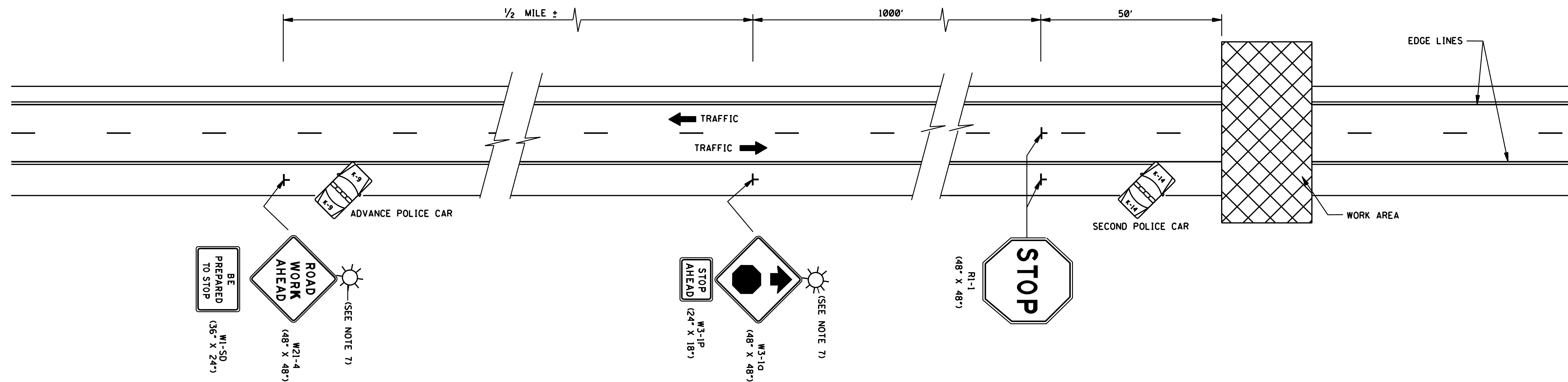
DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



TRAFFIC CONTROL PLAN

WORKING NUMBER: TCP-2
DRAWING NUMBER: 10



GENERAL NOTES:

1. THIS TYPE OF HIGHWAY CLOSURE SHALL ONLY BE USED FOR EMERGENCIES OR FOR CONSTRUCTION OPERATIONS WHEN THE DURATION OF CLOSURE WILL NOT EXCEED 30 MINUTES. AFTER THE HIGHWAY HAS BEEN CLOSED AND REOPENED VIA THIS PROCEDURE, A MINIMUM PERIOD OF 30 MINUTES SHALL ELAPSE BEFORE ANOTHER SHORT DURATION CLOSURE, EXCEPT WITH THE APPROVAL OF THE ENGINEER.
2. AT LEAST TWO POLICEMEN AND TWO POLICE CARS SHALL BE PROVIDED ON EACH APPROACH TO THE CLOSURE. EACH POLICE CAR SHALL HAVE A ROOF MOUNTED ROTATING BLUE LIGHT OR LIGHT BAR.
3. ROAD CLOSURES ARE NOT PERMITTED ON HOLIDAYS OR BETWEEN THE HOURS OF 6 AM TO 9 AM, 11 AM TO 1 PM AND 3 PM TO 6 PM ON MONDAY THROUGH FRIDAY, EXCEPT BY PERMISSION OF THE ENGINEER.
4. THE ADVANCE POLICE CAR AND THE "W21-4 (48" X 48")", "W1-SD (36" X 24")", "W3-1a (48" X 48")", AND "W3-1P (24" X 18")" SIGNS SHALL BE MOVED BACK AS REQUIRED BY THE QUEUING OF STOPPED VEHICLES.
5. TRAFFIC CONTROL FOR THE CLOSURE SHALL BE ACCOMPLISHED IN THE FOLLOWING ORDER:
 - A. ADVANCE POLICE CAR, LIGHTS AND FLASHERS ON.
 - B. "W21-4 (48" X 48")" AND "W1-SD (36" X 24")" SIGNS ERECTED.
 - C. "W3-1a (48" X 48")" AND "W3-1P (24" X 18")" SIGNS ERECTED.
 - D. SECOND POLICE CAR, LIGHTS AND FLASHERS ON.
 - E. "R1-1 (48" X 48")" SIGNS ERECTED TO STOP TRAFFIC. THE ORDER OF ERECTION SHALL BE IN THE FOLLOWING ORDER: RIGHT SHOULDER THEN CENTER.
6. TRAFFIC CONTROL SHALL BE REMOVED IN THE FOLLOWING ORDER:
 - A. WITH TRAFFIC STOPPED REMOVE THE "R1-1 (48" X 48")" SIGNS TOWARD THE RIGHT SHOULDER IN THE FOLLOWING ORDER: CENTER THEN SIGN ON THE RIGHT SHOULDER.
 - B. AFTER ALL STOPPED VEHICLES HAVE STARTED MOVING, THE "W3-1a (48" X 48")" AND "W3-1P (24" X 18")" SIGNS SHALL BE REMOVED. THESE SIGNS MAY BE COVERED IF RE-USE IS IMMINENT.
 - C. AFTER ALL CARS HAVE RESUMED APPROXIMATELY NORMAL SPEED, THE "W21-4 (48" X 48")" AND "W1-SD (36" X 24")" SIGNS SHALL BE REMOVED. THESE SIGNS MAY BE COVERED IF RE-USE IS IMMINENT.
7. UNILLUMINATED SECTIONS OF HIGHWAYS SHALL NOT BE CLOSED DURING HOURS OF DARKNESS EXCEPT FOR EMERGENCIES OR WITH THE APPROVAL OF THE ENGINEER. WHEN THE HIGHWAY MUST BE CLOSED DURING HOURS OF DARKNESS, A TYPE B HIGH INTENSITY FLASHING BARRICADE WARNING LIGHT SHALL BE USED ON EACH W21-4 AND W3-1a SIGN.
8. IF AN ENTRANCE RAMP IS LOCATED BETWEEN THE W21-4 AND R1-1, THE "W21-4 (48" X 48")", "W1-SD (36" X 24")", "W3-1a (48" X 48")", AND "W3-1P (24" X 18")" SIGNS SHALL ALSO BE ERECTED ON THE RAMP SHOULDER.
9. SIGN "W1-SD (36" X 24")" IS 4" SERIES "C" BLACK LEGEND AND BORDER ON ORANGE BACKGROUND.
10. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC, INCLUDING SECURING POLICE SERVICES.
11. THE ABOVE DURATION WILL APPLY TO EACH APPROACH TO THE CLOSURE.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: DLS DATE: _____

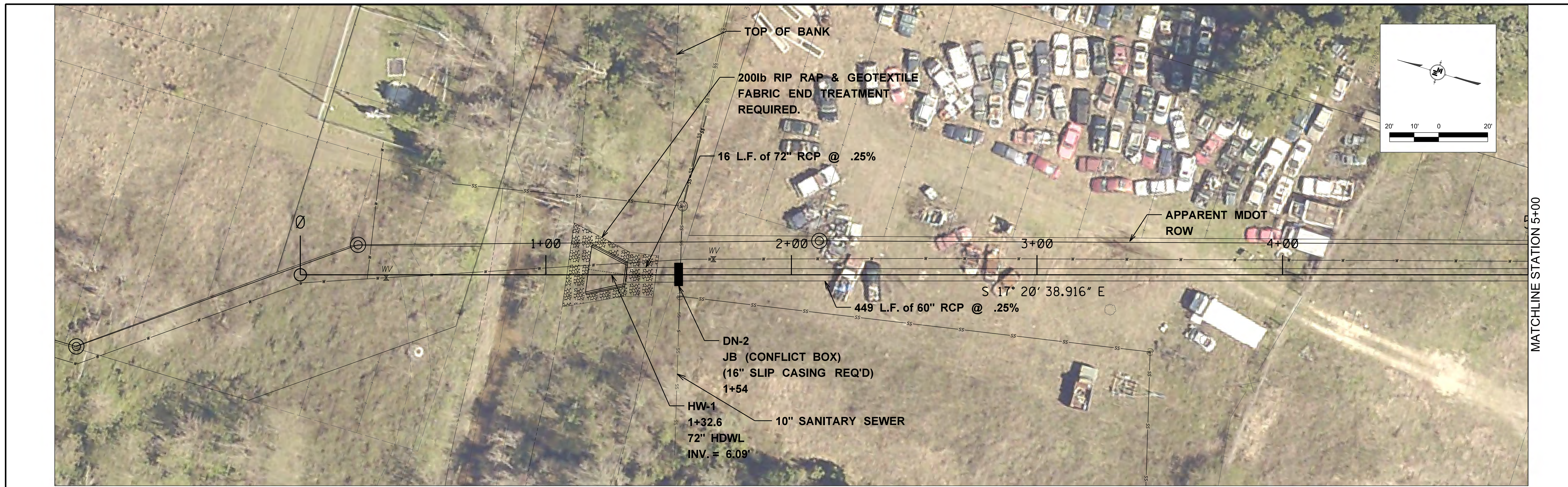
**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI

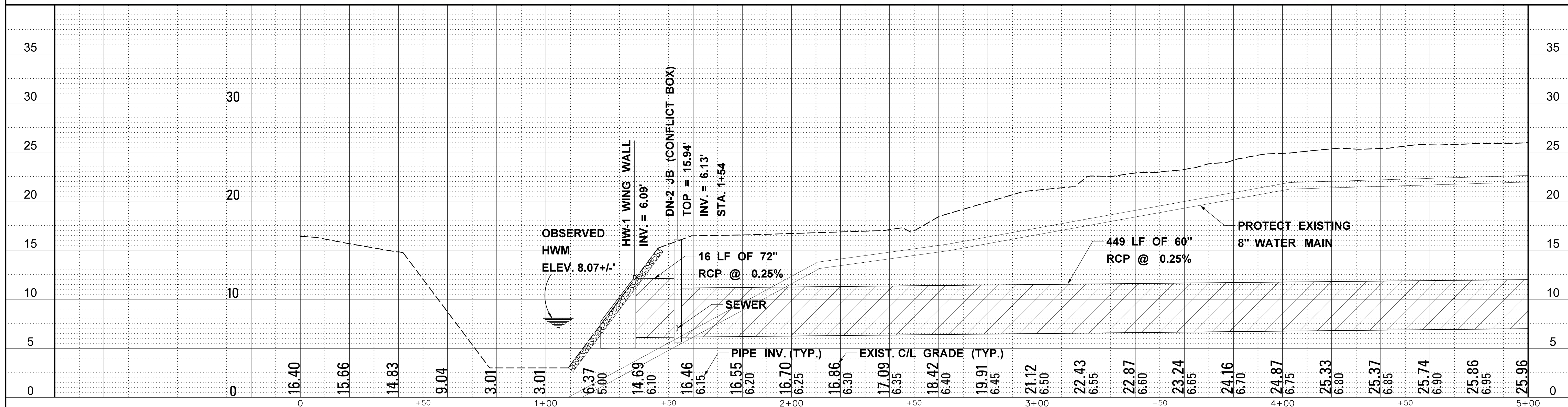


TRAFFIC CONTROL PLAN

WORKING NUMBER: TCP-3	DRAWING NUMBER: 11
--------------------------	-----------------------



1"=20' HORIZ. 1"=5' VERT. (FULL SIZE)



NOTICE TO DRAWING HOLDER
 NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	

N-S PROJECT NO.: 00.14470.00	
FILENAME: _____	
SCALE: _____	
SURVEYED BY: _____	
DSGN: JLD	DATE: _____
DRWN: JTD	DATE: _____
CHKD: JLD	DATE: _____
QA/QC: _____	DATE: _____

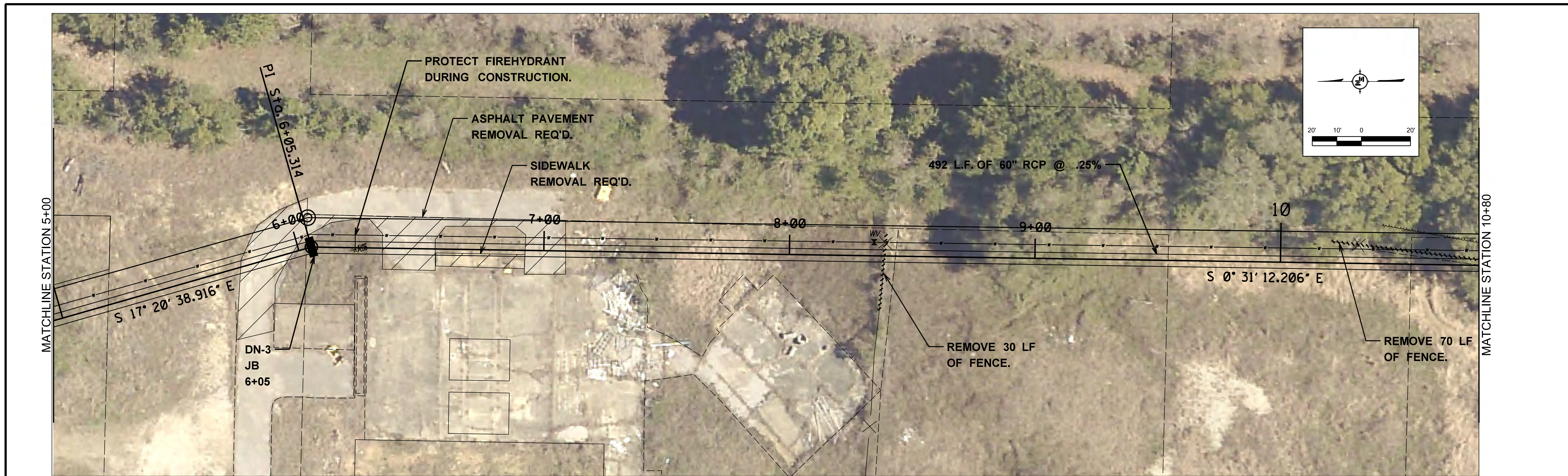
**DRAINAGE IMPROVEMENTS ON
 18TH STREET AT US49
 TO BRICKYARD BAYOU**

CITY OF GULFPORT
 GULFPORT, MISSISSIPPI

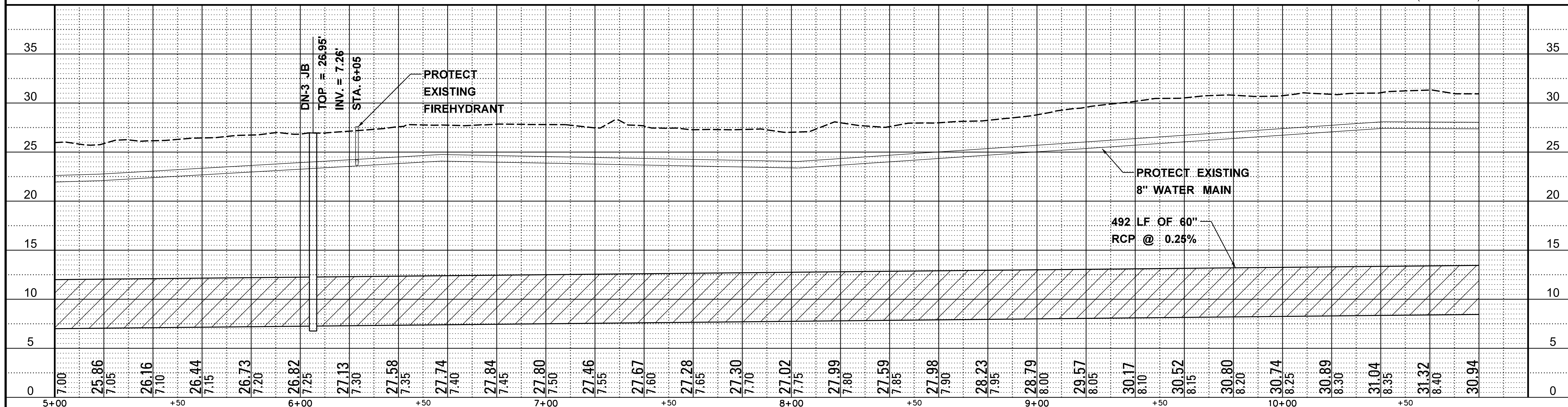


**BRICKYARD BAYOU
 PLAN & PROFILE
 STA. 0+00 TO STA. 5+00**

WORKING NUMBER: PP-1 DRAWING NUMBER: 12



1"=20' HORIZ. 1"=5' VERT. (FULL SIZE)



NOTICE TO DRAWING HOLDER
 NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

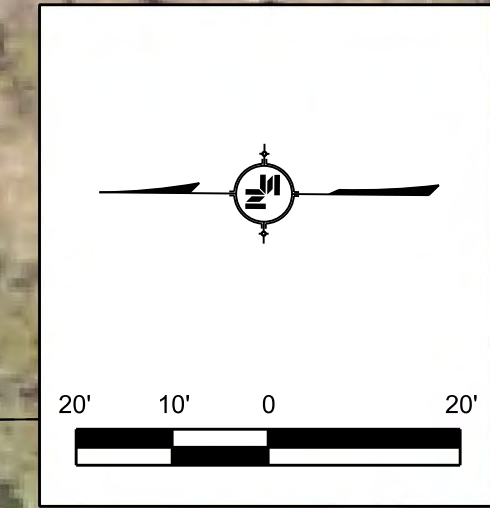
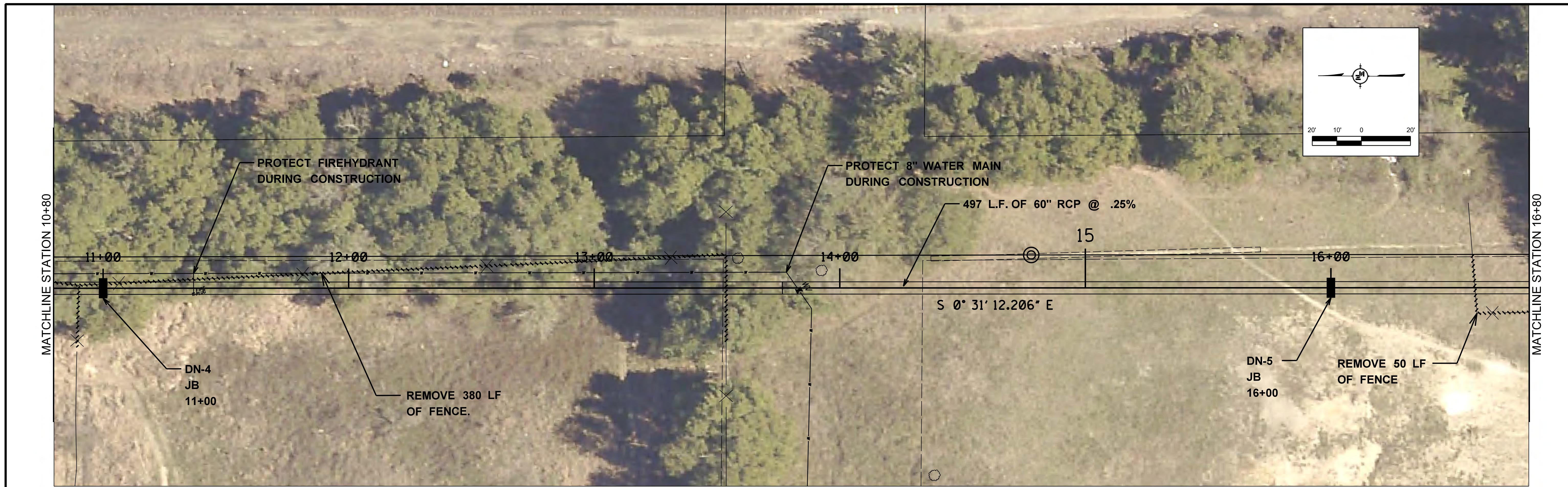
REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: _____
				SCALE: _____
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: _____ DATE: _____

**DRAINAGE IMPROVEMENTS ON
 18TH STREET AT US49
 TO BRICKYARD BAYOU**
 CITY OF GULFPORT
 GULFPORT, MISSISSIPPI

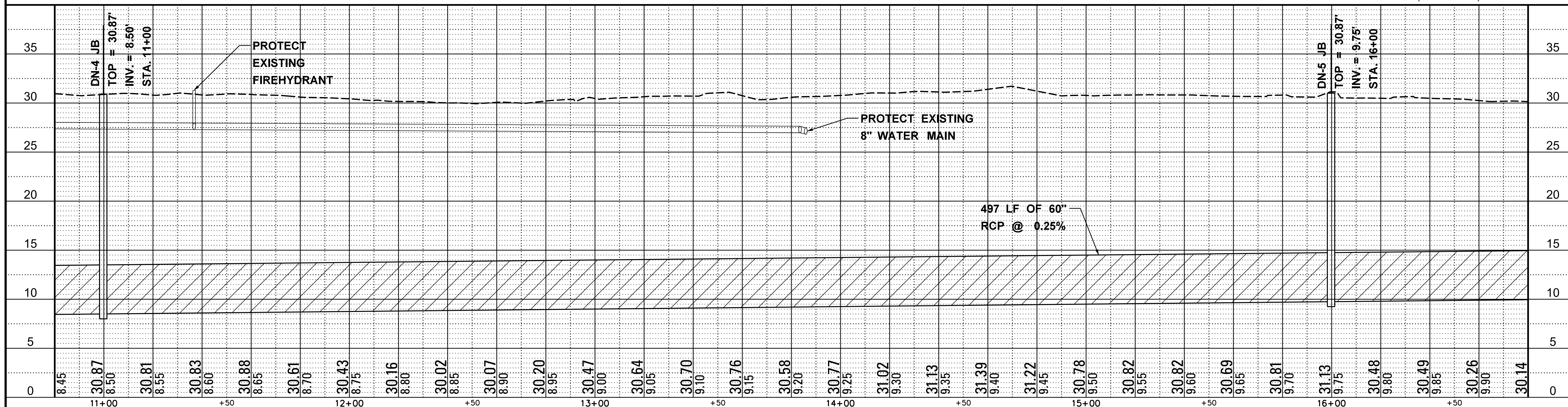


**BRICKYARD BAYOU
 PLAN & PROFILE STA.
 5+00 TO STA. 10+80**

WORKING NUMBER: PP-2 DRAWING NUMBER: 13



1"=20' HORIZ. 1"=5' VERT. (FULL SIZE)



NOTICE TO DRAWING HOLDER
 NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	

N-S PROJECT NO.: 00.14470.00	
FILENAME: _____	
SCALE: _____	
SURVEYED BY: _____	
DSGN: JLD	DATE: _____
DRWN: JTD	DATE: _____
CHKD: JLD	DATE: _____
QA/QC: _____	DATE: _____

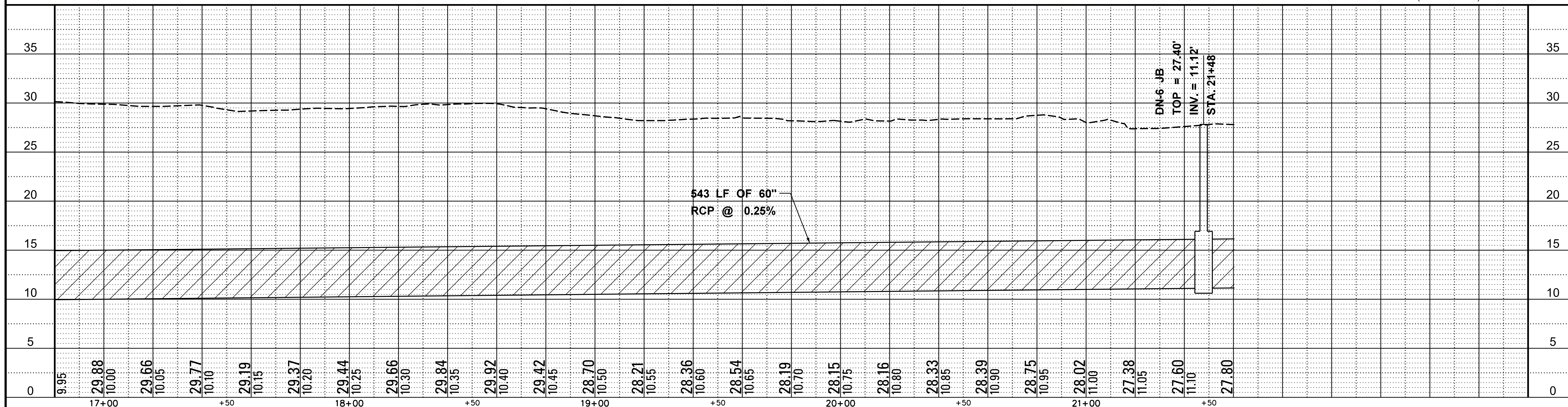
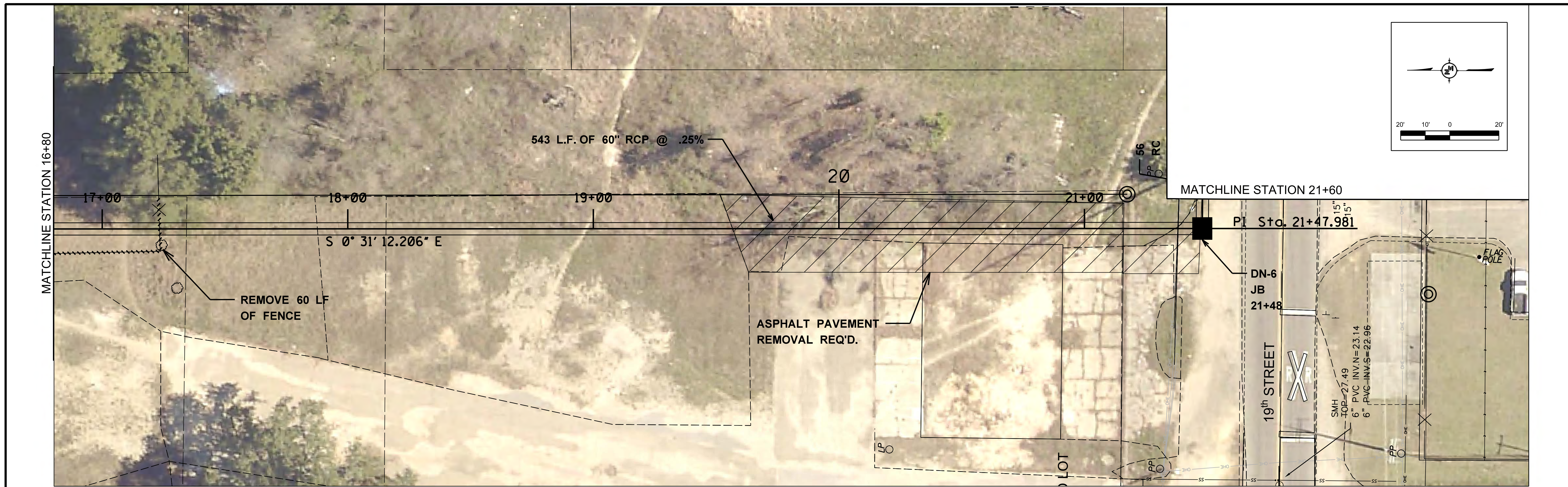
**DRAINAGE IMPROVEMENTS ON
 18TH STREET AT US49
 TO BRICKYARD BAYOU**

CITY OF GULFPORT
 GULFPORT, MISSISSIPPI



**BRICKYARD BAYOU
 PLAN & PROFILE STA.
 10+80 TO STA. 16+80**

WORKING NUMBER: PP-3	DRAWING NUMBER: 14
-------------------------	-----------------------



NOTICE TO DRAWING HOLDER
 NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: _____
				SCALE: _____
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: _____ DATE: _____

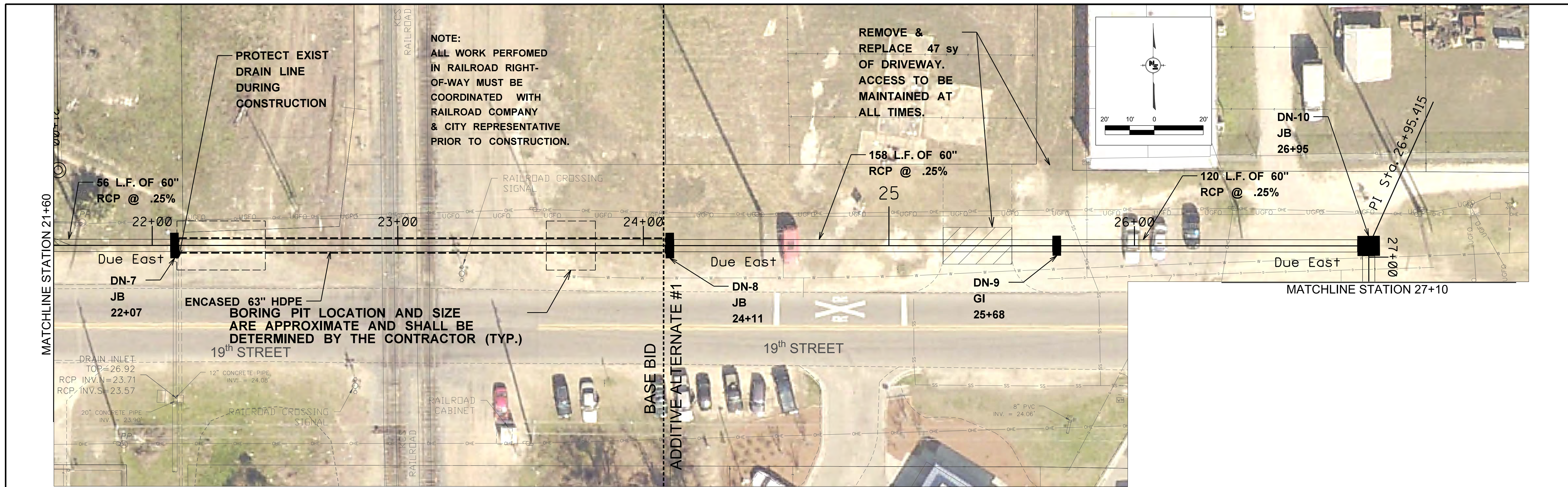
**DRAINAGE IMPROVEMENTS ON
 18TH STREET AT US49
 TO BRICKYARD BAYOU**

CITY OF GULFPORT
 GULFPORT, MISSISSIPPI

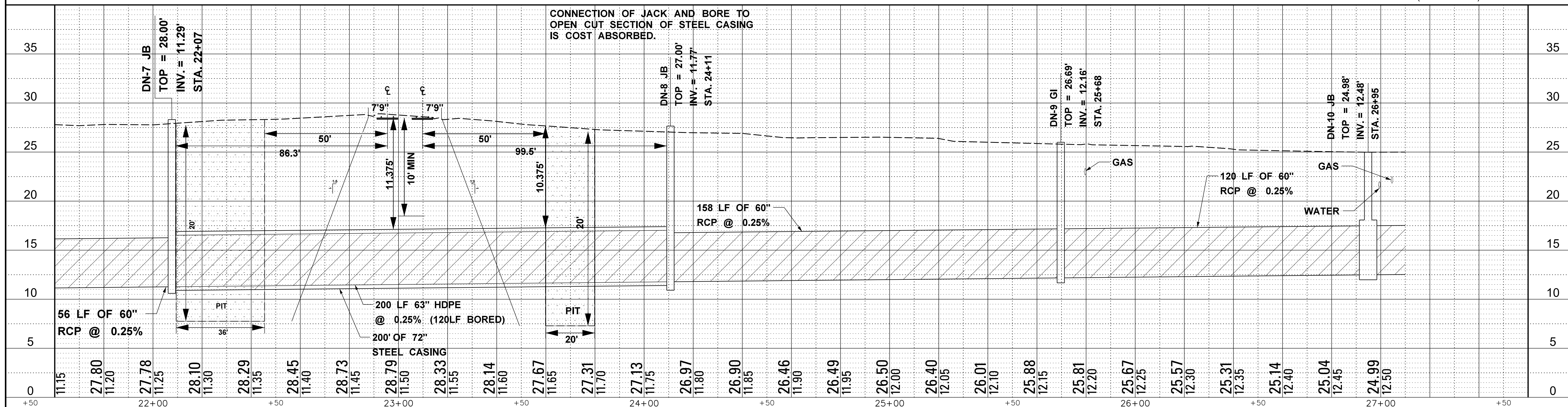


**BRICKYARD BAYOU
 PLAN & PROFILE STA.
 16+80 TO STA. 21+60**

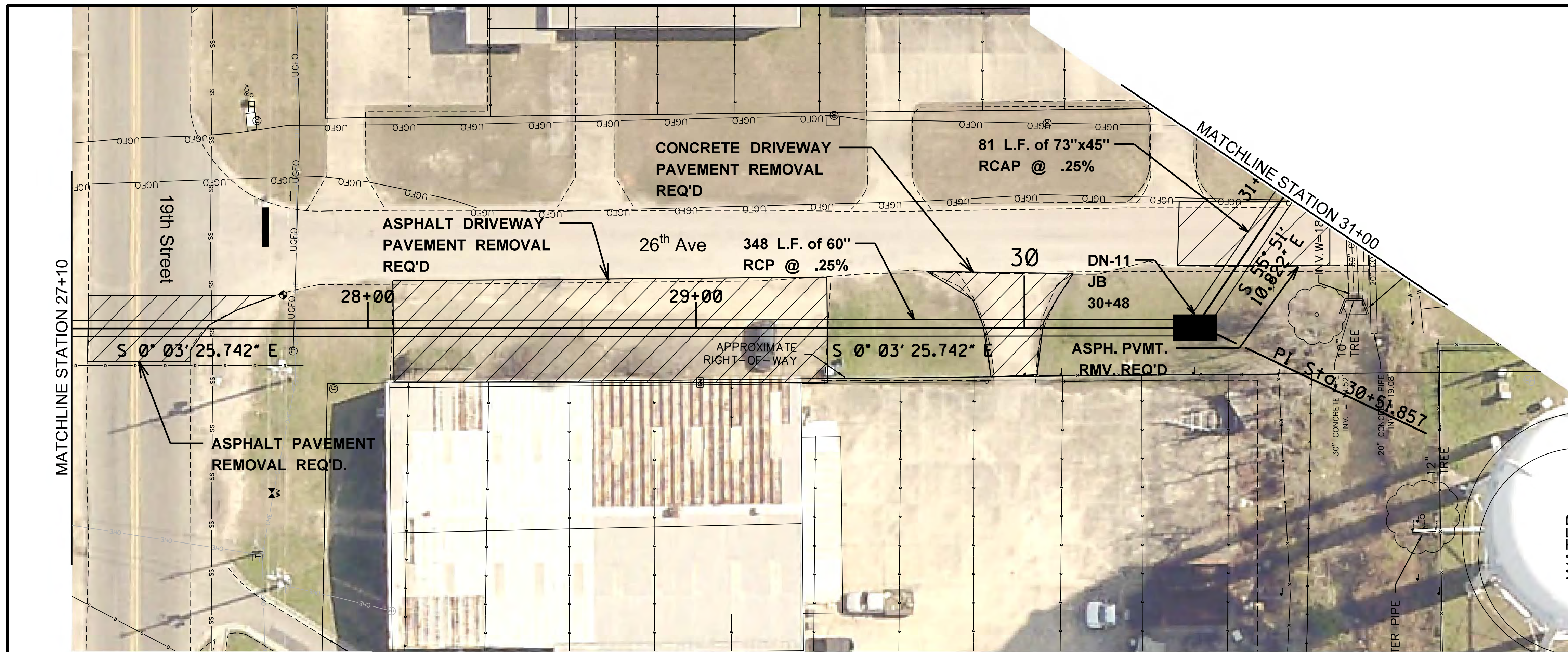
WORKING NUMBER: PP-4 DRAWING NUMBER: 15



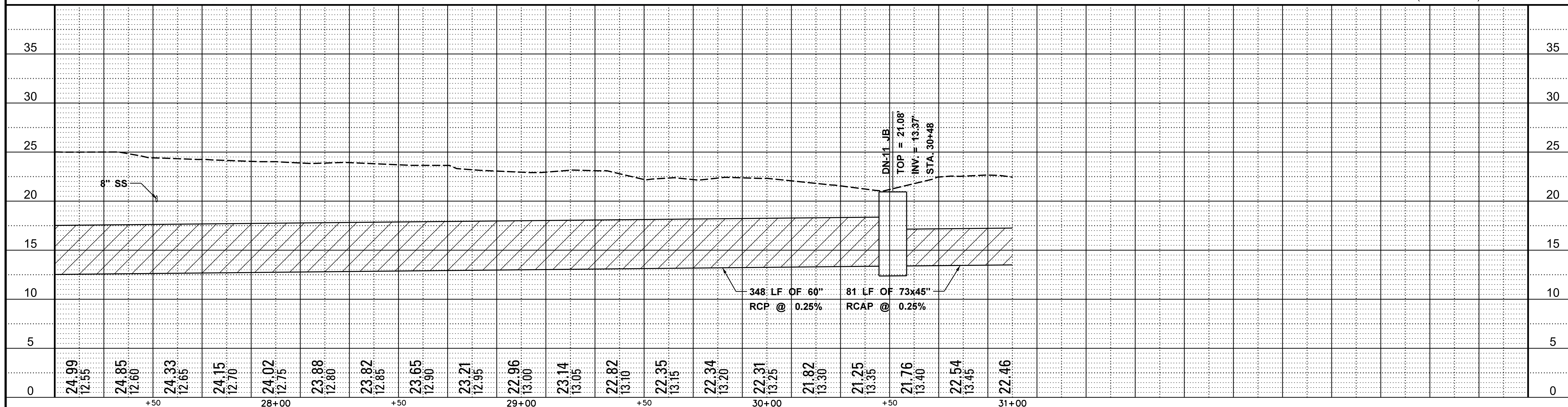
1"=20' HORIZ. 1"=5' VERT. (FULL SIZE)



<p>NOTICE TO DRAWING HOLDER</p> <p>NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS			NO.	DATE	DESCRIPTION										<p>DRAWING INFORMATION</p> <p>N-S PROJECT NO.: 00.14470.00</p> <p>FILENAME: _____</p> <p>SCALE: _____</p> <p>SURVEYED BY: _____</p> <p>DSGN: JLD DATE: _____</p> <p>DRWN: JTD DATE: _____</p> <p>CHKD: JLD DATE: _____</p> <p>QA/QC: _____ DATE: _____</p>	<p>DRAINAGE IMPROVEMENTS ON 18TH STREET AT US49 TO BRICKYARD BAYOU</p> <p>CITY OF GULFPORT GULFPORT, MISSISSIPPI</p>	<p>NEEL-SCHAFFER <i>Solutions you can build upon</i></p>	<p>BRICKYARD BAYOU PLAN & PROFILE STA. 21+60 TO STA. 27+10</p> <p>WORKING NUMBER: PP-5 DRAWING NUMBER: 16</p>
REVISIONS																				
NO.	DATE	DESCRIPTION																		



1"=20' HORIZ. 1"=5' VERT. (FULL SIZE)



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: _____
				SCALE: _____
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: _____ DATE: _____

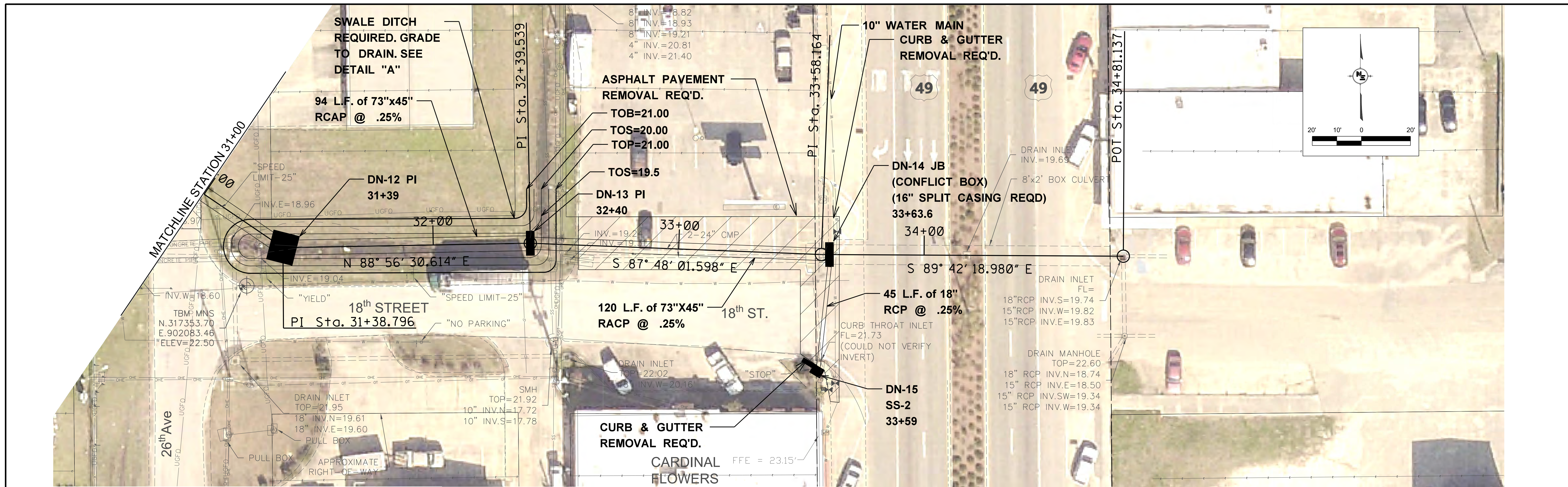
**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI

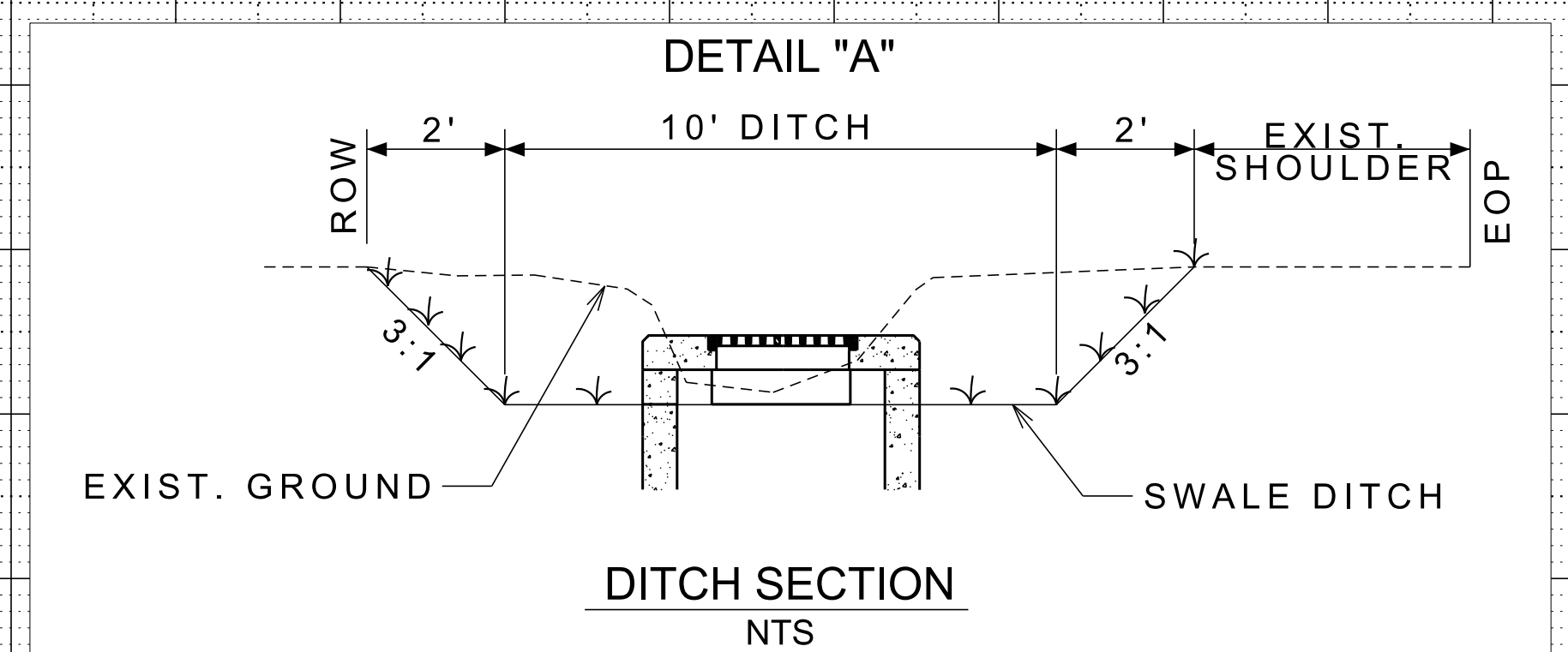
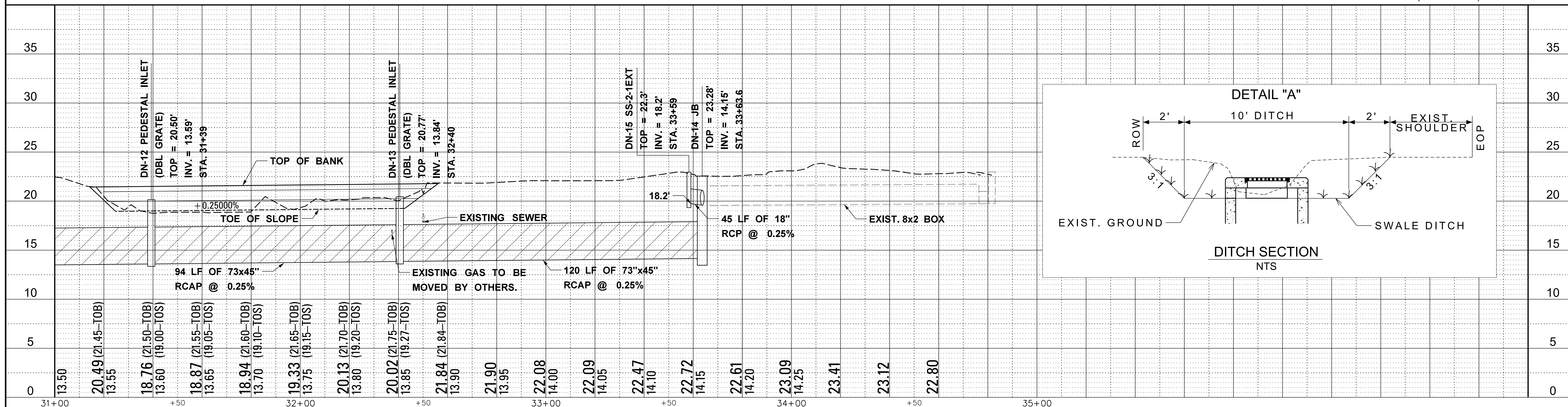


**BRICKYARD BAYOU
PLAN & PROFILE STA.
27+10 TO STA. 31+00**

WORKING NUMBER: PP-6
DRAWING NUMBER: 17



1"=20' HORIZ. 1"=5' VERT. (FULL SIZE)



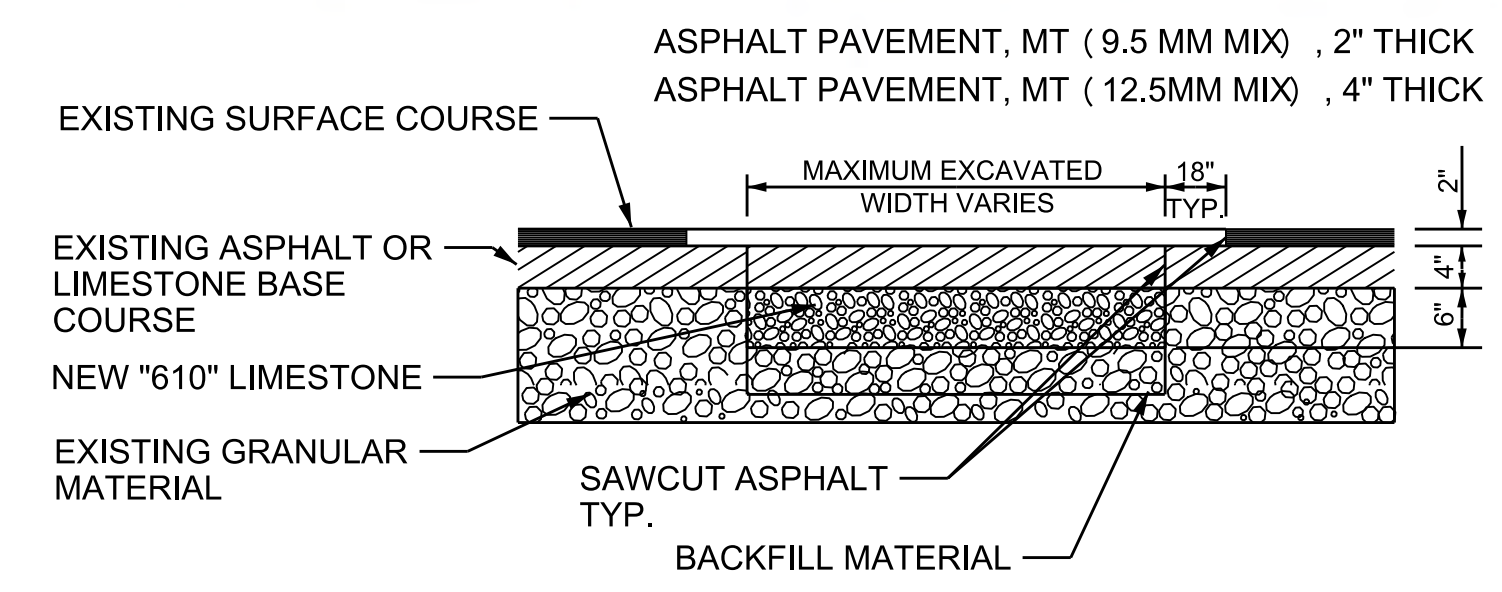
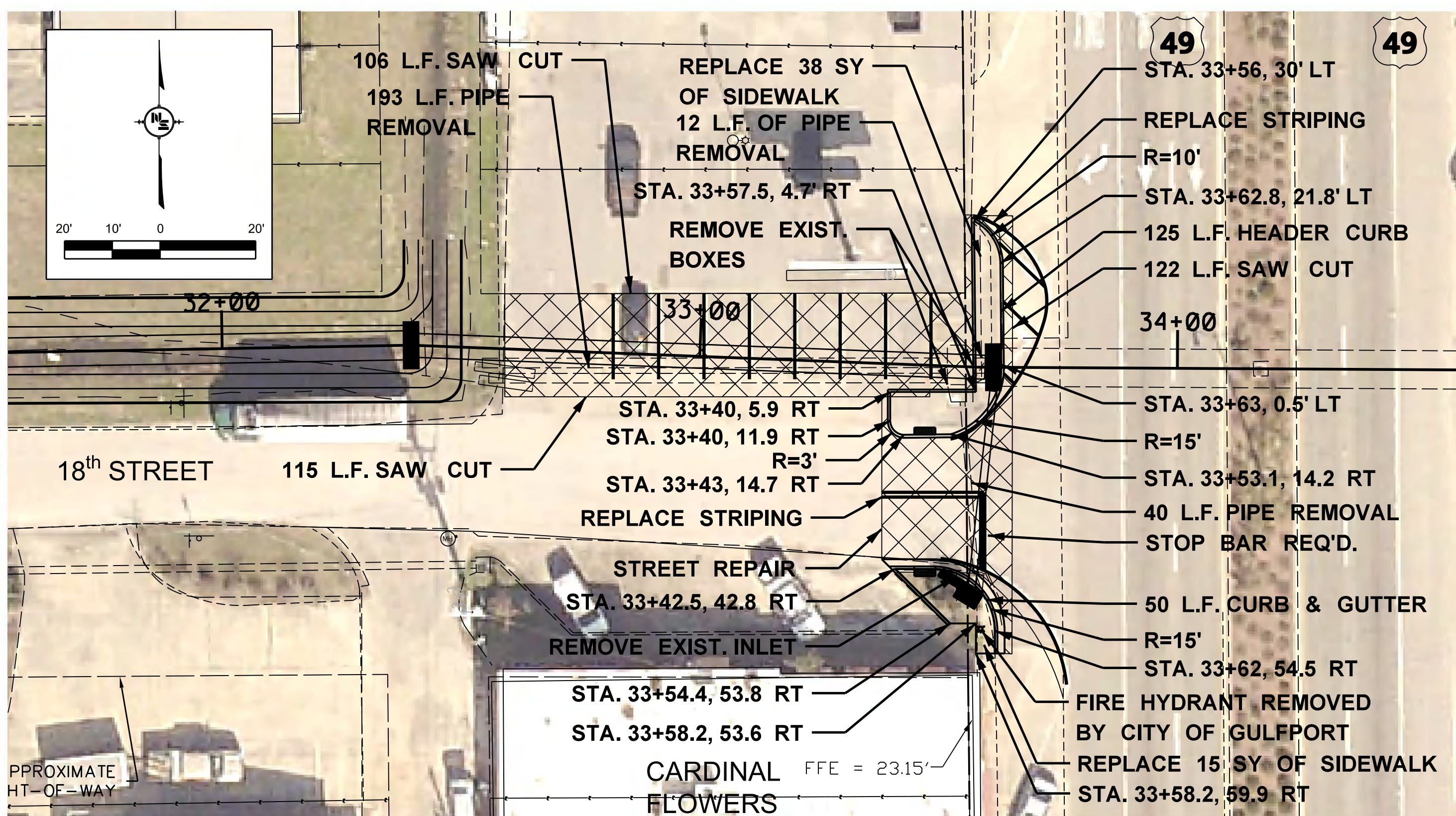
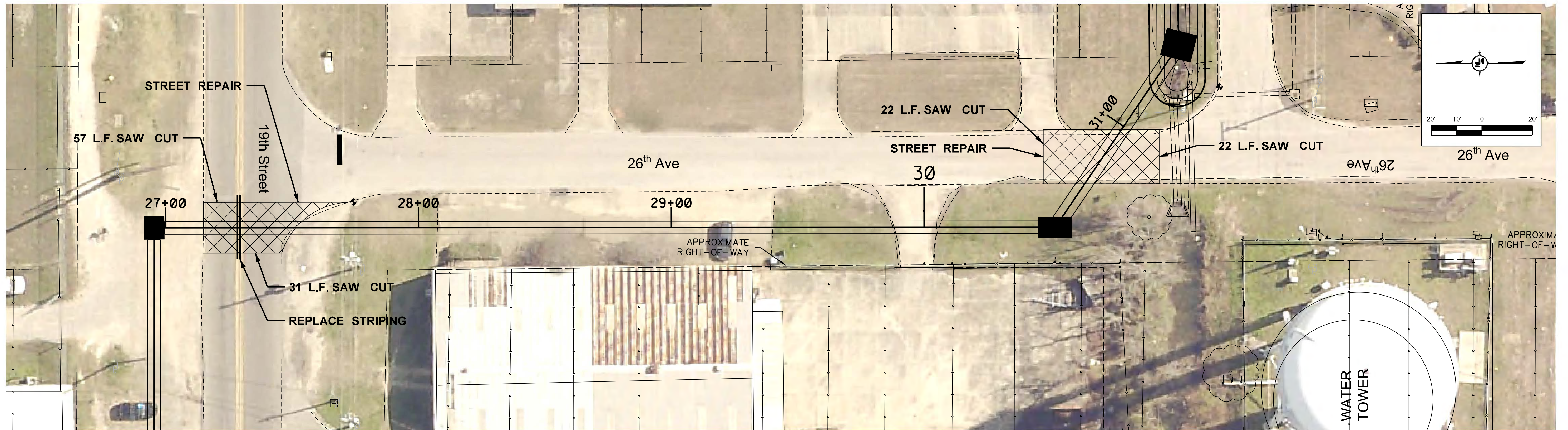
NOTICE TO DRAWING HOLDER
 NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	

**DRAINAGE IMPROVEMENTS ON
 18TH STREET AT US49
 TO BRICKYARD BAYOU**
 CITY OF GULFPORT
 GULFPORT, MISSISSIPPI



**BRICKYARD BAYOU
 PLAN & PROFILE STA.
 31+00 TO E.O.P.**
 WORKING NUMBER: PP-7
 DRAWING NUMBER: 18



- NOTES:
- EXISTING GRANULAR MATERIAL, NEW BACKFILL MATERIAL, AND NEW "610" LIMESTONE SHALL BE COMPACTED TO 95% PROCTOR PER ASTM D1557.
 - TACK COAT SHALL BE APPLIED WHERE NEW ASPHALT MEETS EXISTING ASPHALT AND SHALL BE COST ABSORBED.
 - REFER TO OTHER DETAILS FOR UTILITY PLACEMENT. PAVEMENT MARKINGS REMOVED SHALL BE REPLACED AND PAID FOR UNDER PAY ITEM 02581-A, PAINTED TRAFFIC MARKINGS PER LUMP SUM.
 - "MAXIMUM EXCAVATED WIDTH" REFERS TO THE MAXIMUM WIDTH THAT WILL BE USED FOR COMPUTATION OF APPLICABLE PAY ITEMS FOR BEDDING, BORROW FOR BACKFILL, LIMESTONE, OR PAVING. THE CONTRACTOR MAY EXCAVATE A WIDER TRENCH AT HIS OWN EXPENSE AS LONG AS THE TRENCH REMAINS WITHIN THE LIMITS OF THE CITY R.O.W., PROPERTY OR EASEMENT AND THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE APPROVES THE DIMENSIONS OF THE WIDER TRENCH. SEE UTILITY PLACEMENT DETAILS FOR "MAXIMUM EXCAVATED TRENCH WIDTH". LIMITS OF EXCAVATION FOR POINT REPAIRS SHALL BE DETERMINED IN THE FIELD BY THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
 - ASPHALT DRIVEWAY REPAIR SHALL BE 2" THICK 9.5 MM, MT ASPHALT PAVEMENT.

ASPHALT STREET REPAIR DETAIL
N.T.S.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	00.14470.00
				FILENAME:	Geo.dgn
				SCALE:	1"=20'
				SURVEYED BY:	BMA
				DSGN:	JLD DATE: 8/18
				DRWN:	JTD DATE: 8/18
				CHKD:	JLD DATE: 8/18
				QA/QC:	RA DATE: 8/18

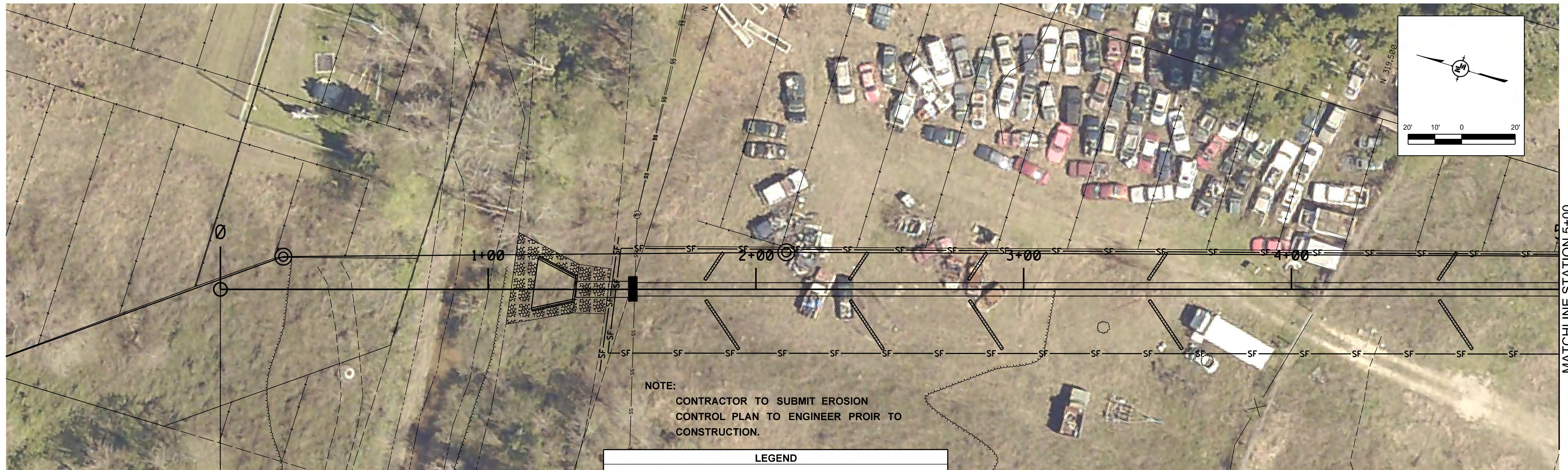
**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



**BRICKYARD BAYOU
GEOMETRIC PLAN**

WORKING NUMBER: GEO-1
DRAWING NUMBER: 19



LEGEND

—SF—	SILT FENCE		INLET PROTECTION
	STRAW WATTLE		RIP RAP TREATMENT



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DRAWING INFORMATION	
N-S PROJECT NO.:	00.14470.00
FILENAME:	
SCALE:	
SURVEYED BY:	
DSGN: JLD	DATE:
DRWN: JTD	DATE:
CHKD: JLD	DATE:
QA/QC:	DATE:

**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



**BRICKYARD BAYOU
SWPPP
B.O.P. TO STA. 11+00**

WORKING NUMBER: SP-1	DRAWING NUMBER: 20
-------------------------	-----------------------

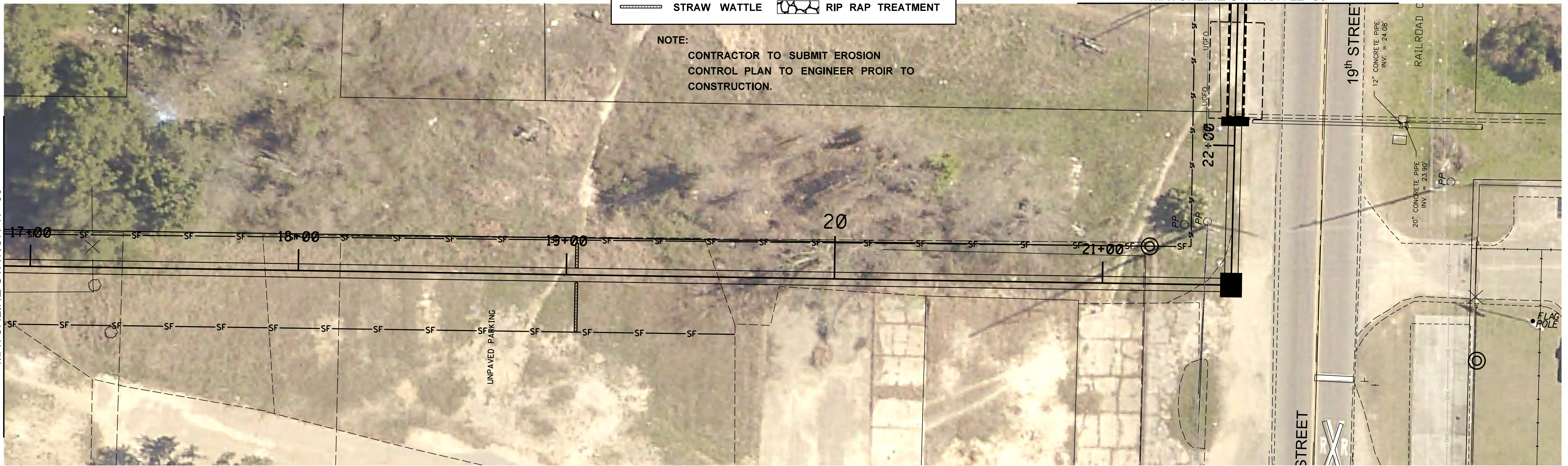


MATCHLINE STATION 11+00

MATCHLINE STATION 17+00

LEGEND	
—SF—	SILT FENCE
▭	INLET PROTECTION
▬▬▬	STRAW WATTLE
⊗	RIP RAP TREATMENT

NOTE:
CONTRACTOR TO SUBMIT EROSION CONTROL PLAN TO ENGINEER PRIOR TO CONSTRUCTION.



MATCHLINE STATION 17+00

MATCHLINE STATION 22+50

NOTICE TO DRAWING HOLDER
NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DRAWING INFORMATION	
N-S PROJECT NO.:	00.14470.00
FILENAME:	
SCALE:	
SURVEYED BY:	
DSGN:	JLD
DATE:	
DRWN:	JTD
DATE:	
CHKD:	JLD
DATE:	
QA/QC:	
DATE:	

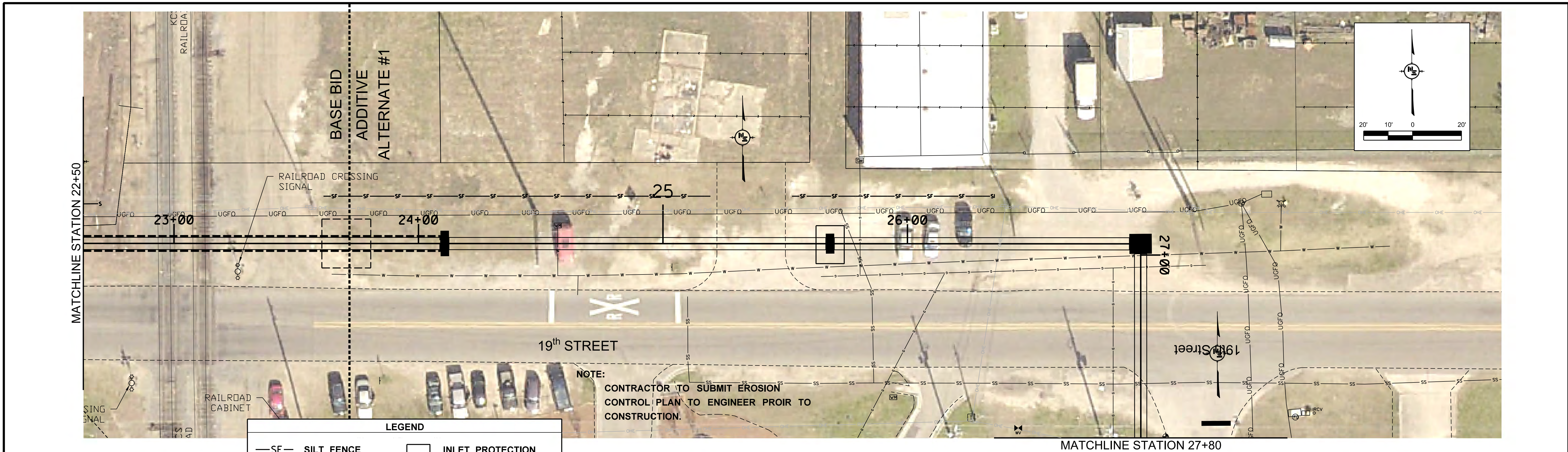
**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI

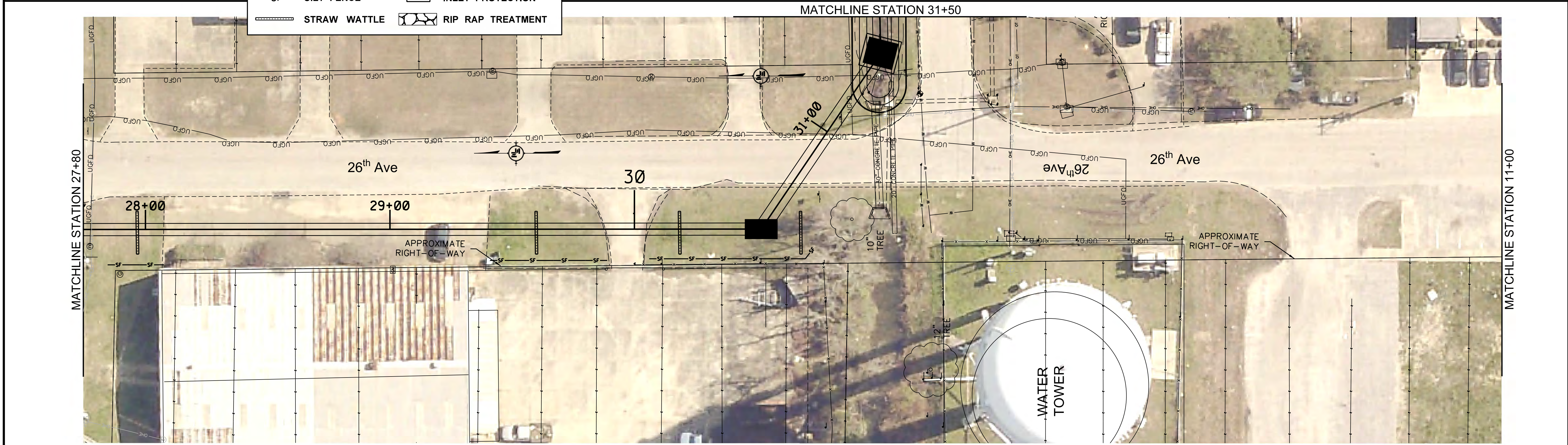


**BRICKYARD BAYOU
SWPPP
STA. 11+00 TO STA. 22+50**

WORKING NUMBER: SP-2	DRAWING NUMBER: 21
-------------------------	-----------------------



LEGEND	
—SF—	SILT FENCE
▭	INLET PROTECTION
▨	STRAW WATTLE
▩	RIP RAP TREATMENT



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

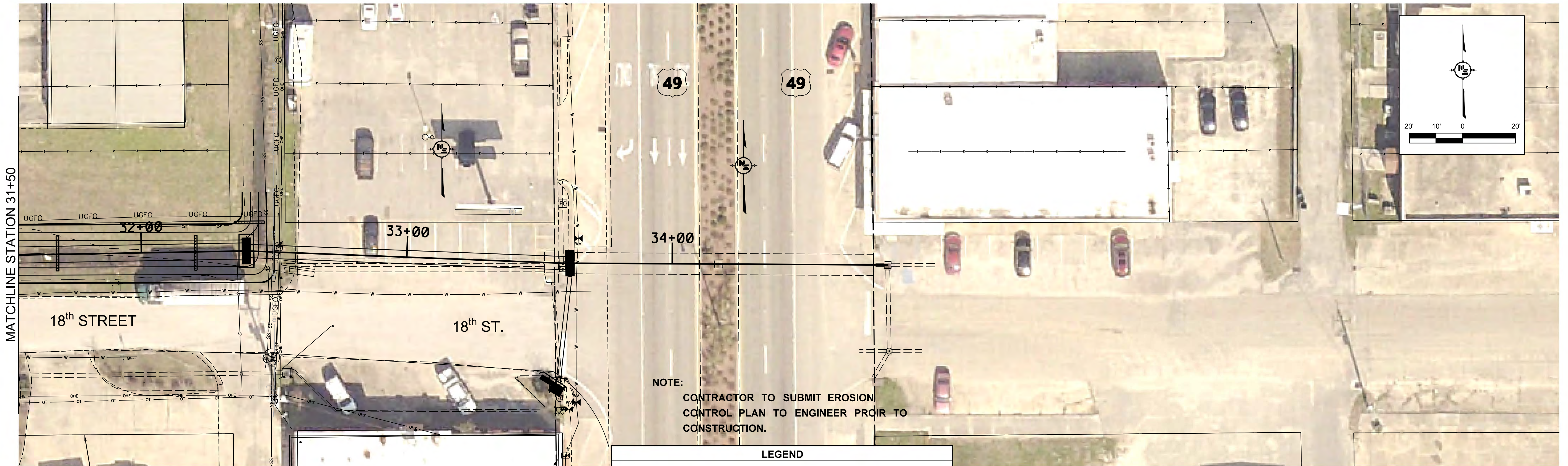
REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	00.14470.00
				FILENAME:	
				SCALE:	
				SURVEYED BY:	
				DSGN: JLD	DATE:
				DRWN: JTD	DATE:
				CHKD: JLD	DATE:
				QA/QC:	DATE:

**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



BRICKYARD BAYOU SWPPP STA. 22+50 TO STA. 31+50	
WORKING NUMBER: SP-3	DRAWING NUMBER: 22



NOTE:
CONTRACTOR TO SUBMIT EROSION CONTROL PLAN TO ENGINEER PRIOR TO CONSTRUCTION.

LEGEND			
—SF—	SILT FENCE		INLET PROTECTION
	STRAW WATTLE		RIP RAP TREATMENT

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	00.14470.00
				FILENAME:	
				SCALE:	
				SURVEYED BY:	
				DSGN: JLD	DATE:
				DRWN: JTD	DATE:
				CHKD: JLD	DATE:
				QA/QC:	DATE:

**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

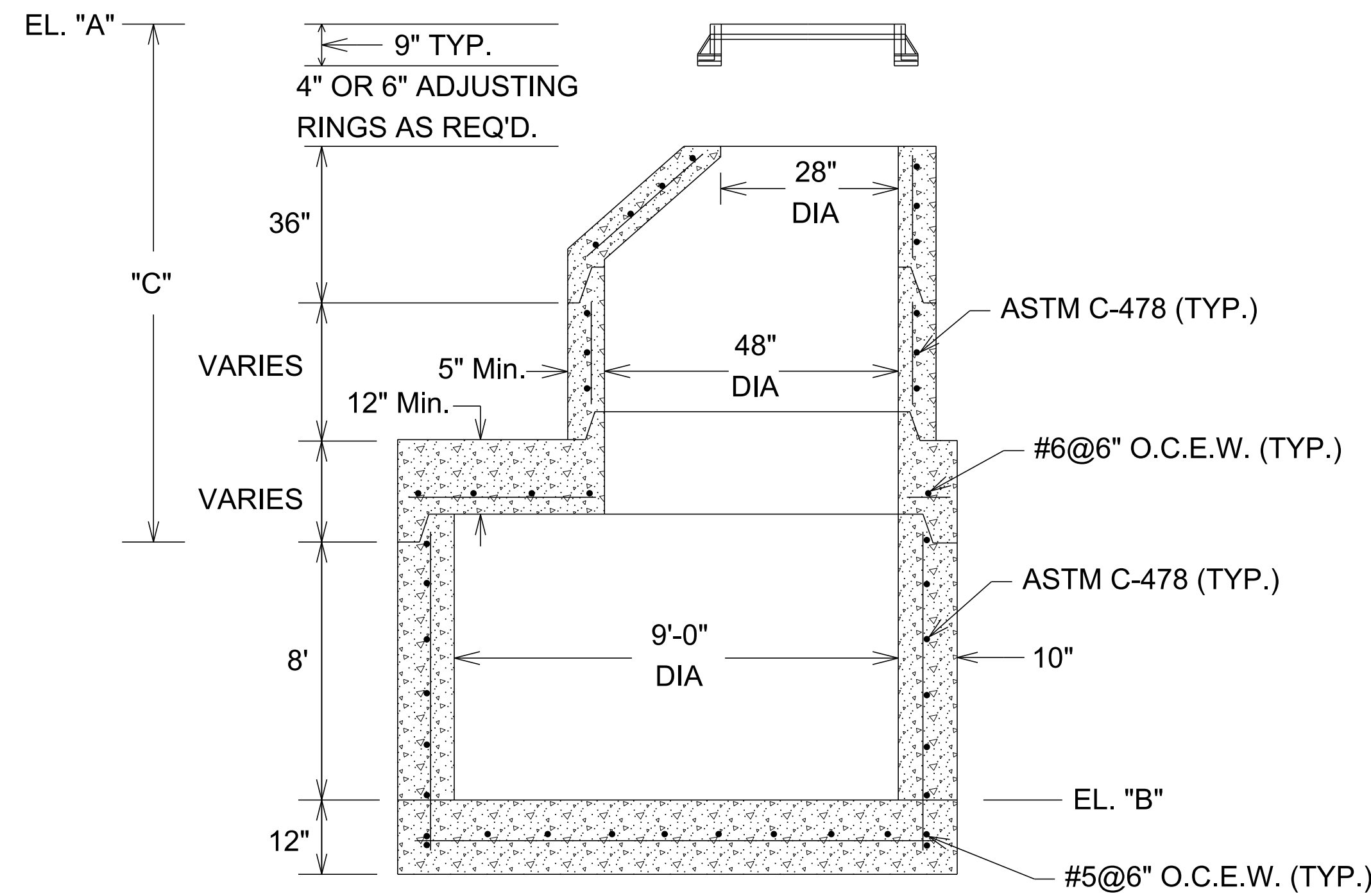
CITY OF GULFPORT
GULFPORT, MISSISSIPPI



**BRICKYARD BAYOU
SWPPP
STA. 31+50 TO E.O.P.**

WORKING NUMBER:	DRAWING NUMBER:
SP-4	23

PRECAST DRAINAGE
STRUCTURE
NOT TO SCALE



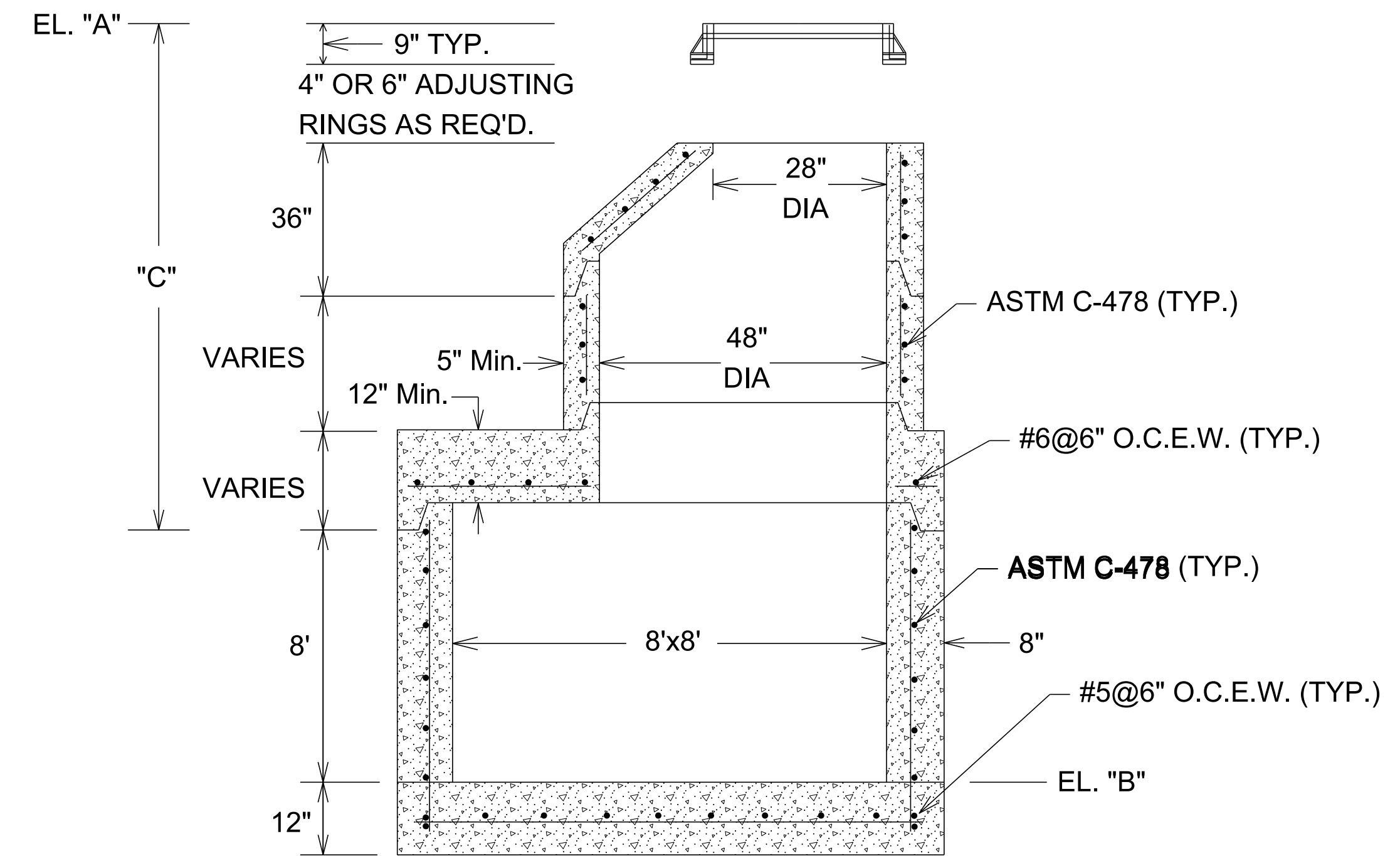
* CONCRETE: 4,000 PSI WALL
REINFORCING PER ASTM C-478 STANDARD

JB#	"A"	"B"	"C"
DN-3	26.95	7.26	11.69
DN-4	30.87	8.5	14.37
DN-5	30.87	9.75	13.12
DN-7	28.0	11.29	8.71
DN-8	27.0	11.77	7.23
DN-9	26.84	12.16	6.68

GRATE TOP →

ALL ELEVATIONS TO BE VERIFIED
PRIOR TO CONSTRUCTION

PRECAST DRAINAGE
STRUCTURE
NOT TO SCALE



* CONCRETE: 4,000 PSI WALL
REINFORCING PER ASTM C-478 STANDARD

JB#	"A"	"B"	"C"
DN-6	27.40	11.12	8.28
DN-10	24.98	12.48	4.5

ALL ELEVATIONS TO BE VERIFIED
PRIOR TO CONSTRUCTION

- NOTES:
1. VERIFY DIMENSIONS PRIOR TO ORDERING.
 2. BOXES SHALL CONFORM TO ASTM C-478
 3. O.C.E.W. - ON CENTER EACH WAY.
 4. ANY MODIFICATIONS TO THE BOX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: DLS DATE: _____

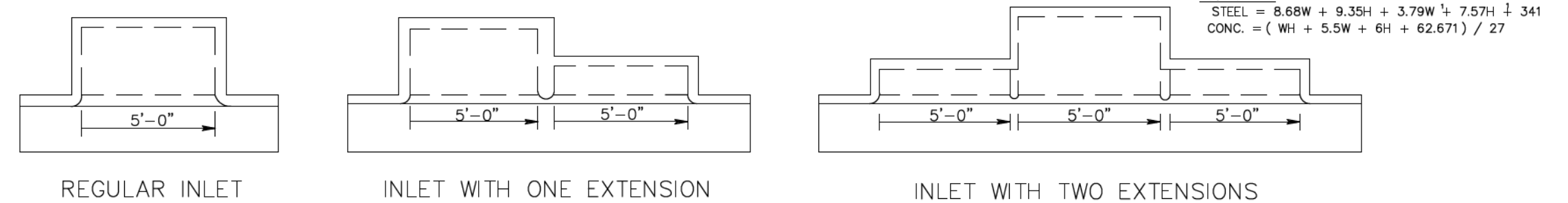
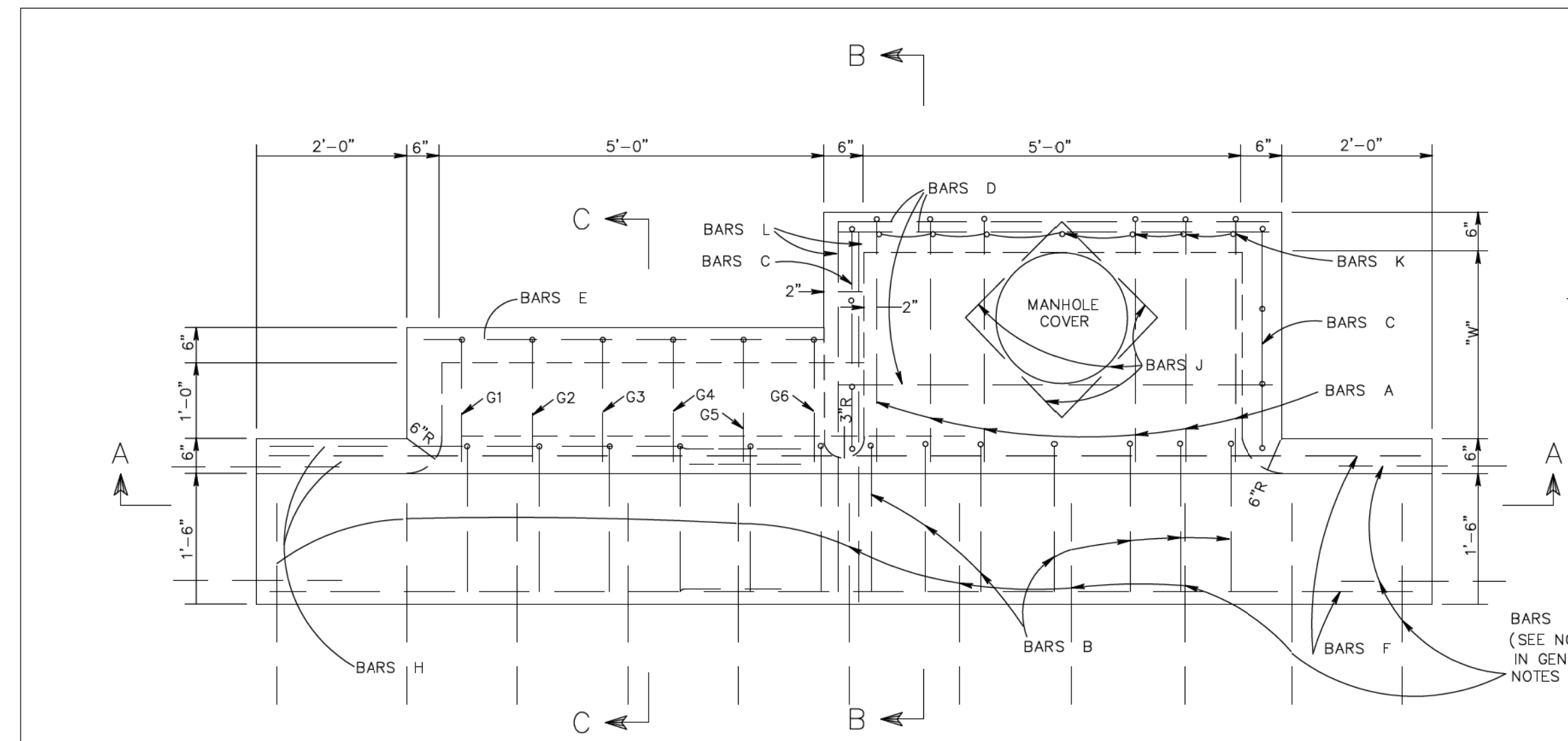
DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



PRECAST BOX
DETAIL

WORKING NUMBER: DET-1 DRAWING NUMBER: 24

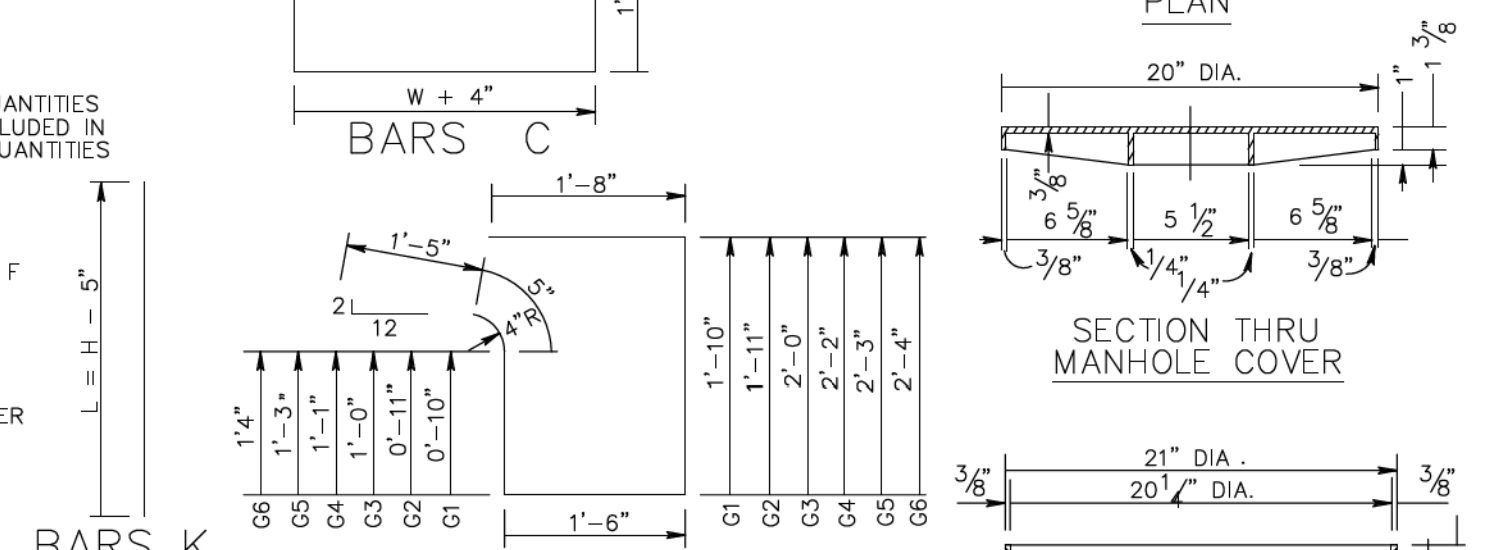
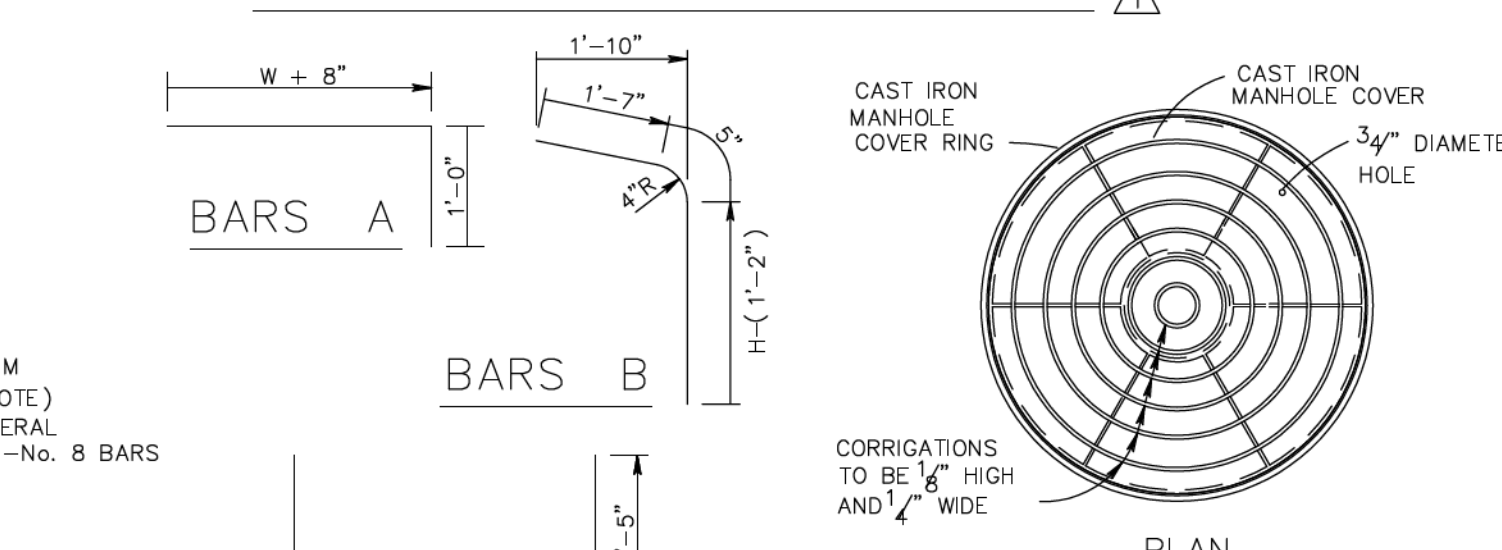


5' INLET
STEEL = 8.68W + 9.35H + 3.79W^{1/2} + 7.57H^{1/2} + 121
CONC. = (WH + 5.5W + 6H + 14.611) / 27

10' INLET
STEEL = 8.68W + 9.35H + 3.79W^{1/2} + 7.57H^{1/2} + 231
CONC. = (WH + 5.5W + 6H + 38.64) / 27

15' INLET
STEEL = 8.68W + 9.35H + 3.79W^{1/2} + 7.57H^{1/2} + 341
CONC. = (WH + 5.5W + 6H + 62.671) / 27

NOTE:
1. W AND H ARE EXPRESSED IN FEET AND FRACTIONS OF FEET
2. W = W ROUNDED TO THE NEAREST WHOLE FOOT.
3. H = H-1.58 ROUNDED OFF TO THE NEAREST WHOLE FOOT.
4. NO DEDUCTIONS ARE MADE FOR PIPE OPENINGS IN FORMULAS.



BILL OF REINFORCING STEEL W=2'-6" 1-5'-0" INLET

"H"	BAR A	BAR C	BAR D	BAR F	BAR J	BAR B	BAR K	*TOTAL STEEL	TOTAL CONC.
NO.	WT.	NO.	WT.	NO.	WT.	NO.	WT.	LBS.	C.Y.
3'-0"	6 17	7 27	10 38	5 73	4 6	3'-10"	7 12	190	1.99
3'-6"	6 17	7 27	12 45	5 73	4 6	4'-4"	7 20	202	2.15
4'-0"	6 17	7 27	12 45	5 73	4 6	4'-10"	7 23	207	2.31
4'-6"	6 17	7 27	14 53	5 73	4 6	5'-4"	7 25	219	2.47
5'-0"	6 17	7 27	14 53	5 73	4 6	5'-10"	7 27	224	2.62
5'-6"	6 17	7 27	16 61	5 73	4 6	6'-4"	7 30	238	2.78
6'-0"	6 17	7 27	16 61	5 73	4 6	6'-10"	7 32	240	2.94
6'-6"	6 17	7 27	18 68	5 73	4 6	7'-4"	7 34	253	3.10
7'-0"	6 17	7 27	18 68	5 73	4 6	7'-10"	7 37	257	3.25

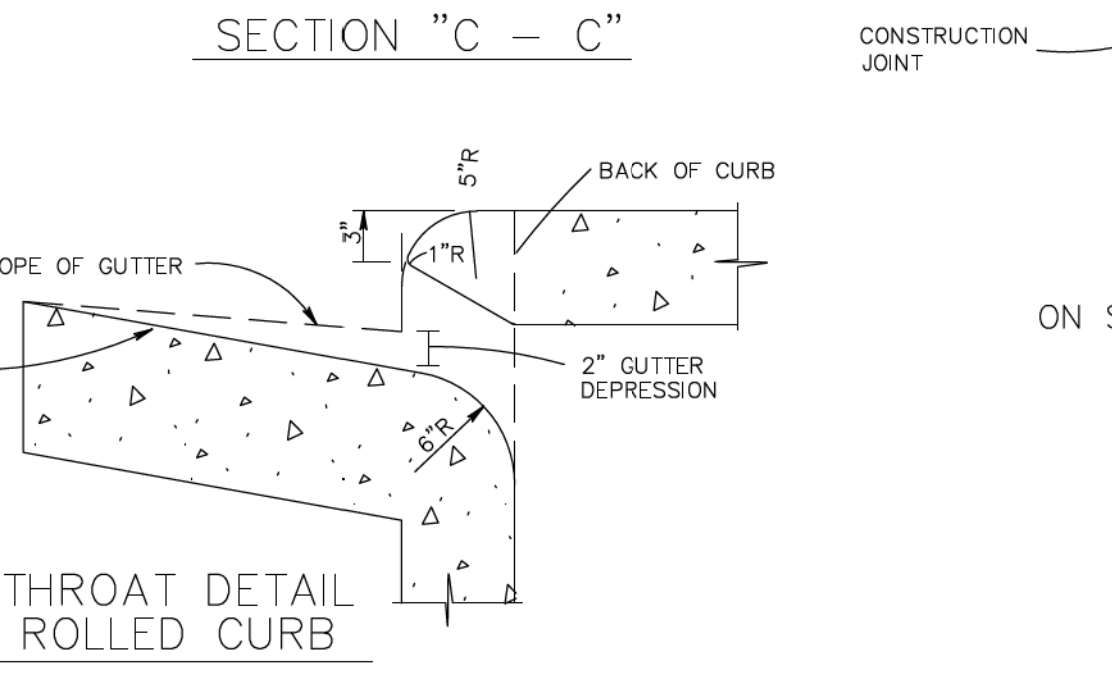
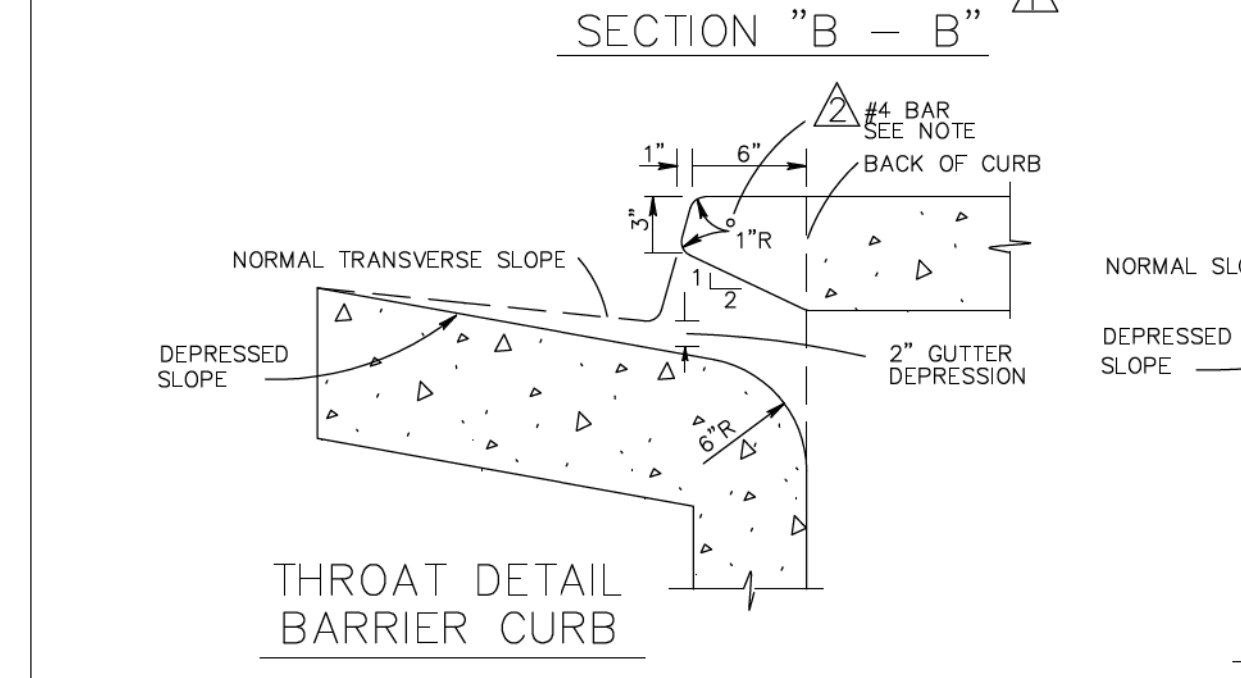
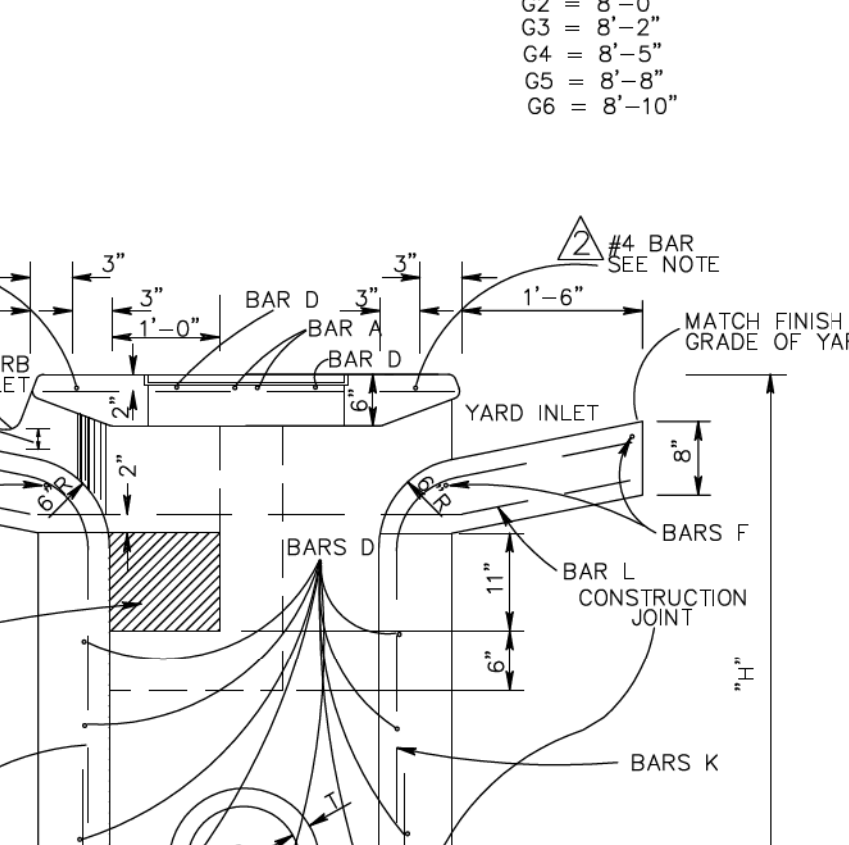
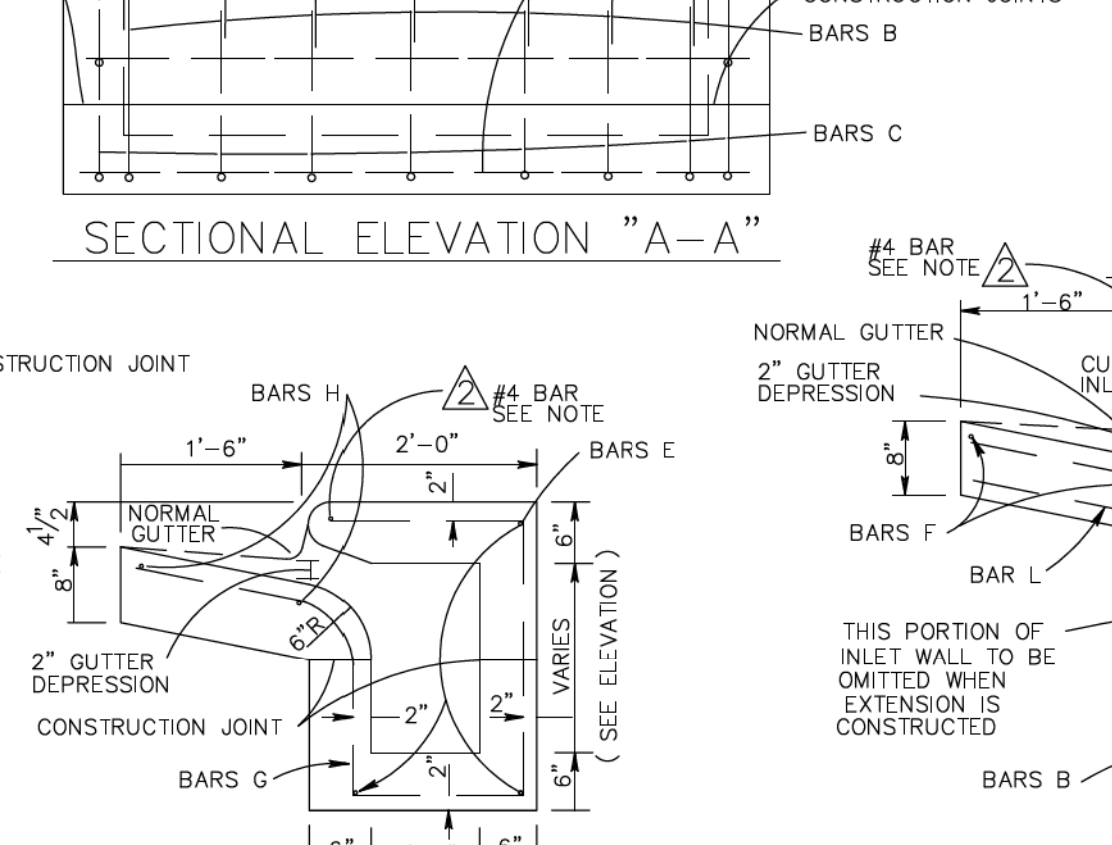
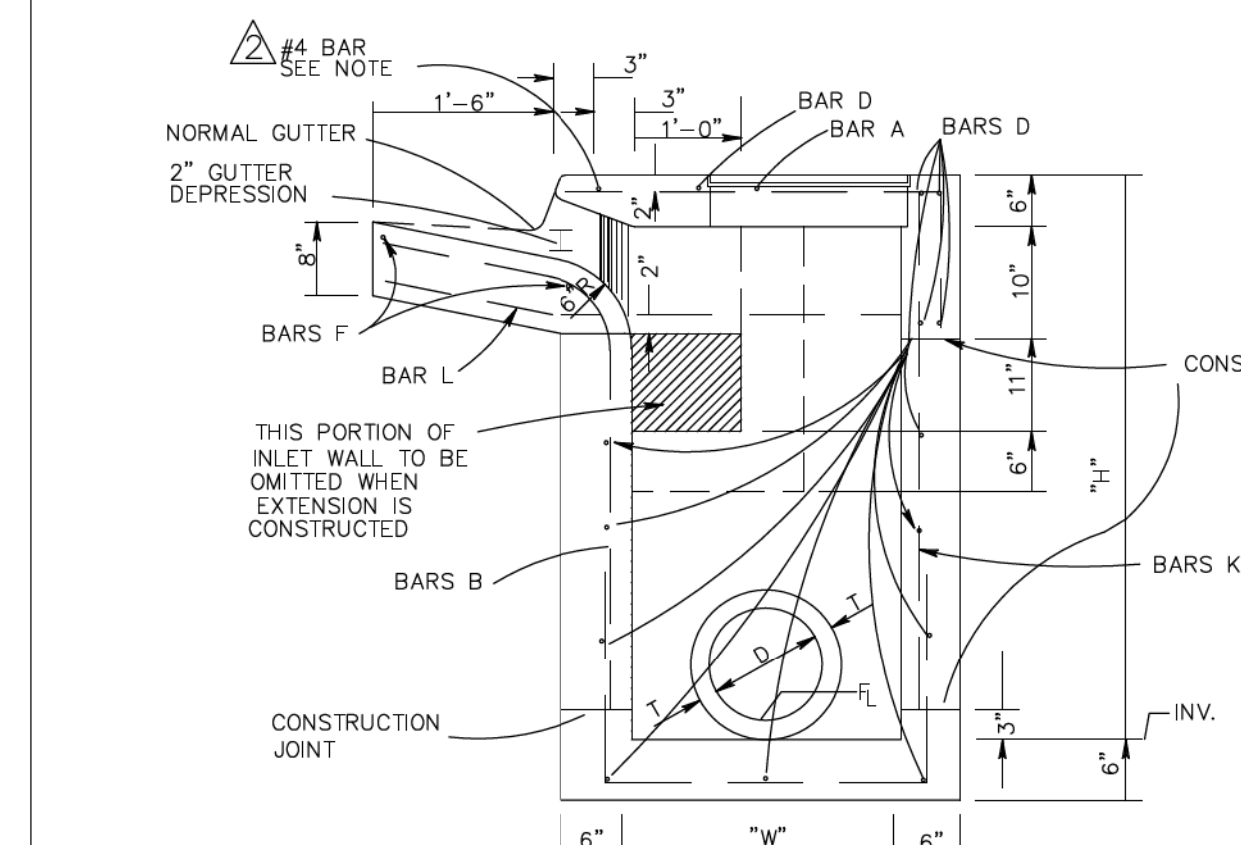
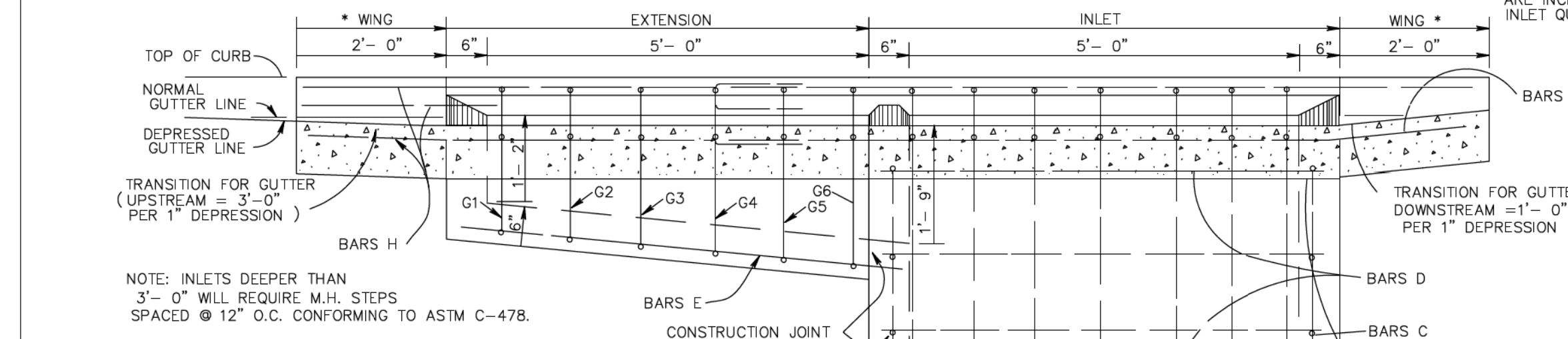
* WHERE INLET IS USED WITH CONCRETE PAVEMENT, ADD 73 LBS. OF STEEL FOR BARS M

BILL OF REINFORCING STEEL W=3'-0" 1-5'-0" INLET

"H"	BAR A	BAR C	BAR D	BAR F	BAR J	BAR B	BAR K	*TOTAL STEEL	TOTAL CONC.
NO.	WT.	NO.	WT.	NO.	WT.	NO.	WT.	LBS.	C.Y.
3'-0"	6 19	7 29	10 38	5 73	4 6	3'-10"	7 12	194	2.15
3'-6"	6 19	7 29	12 45	5 73	4 6	4'-4"	7 20	211	2.49
4'-0"	6 19	7 29	12 45	5 73	4 6	4'-10"	7 23	211	2.65
4'-6"	6 19	7 29	14 53	5 73	4 6	5'-4"	7 25	223	2.82
5'-0"	6 19	7 29	14 53	5 73	4 6	5'-10"	7 27	228	2.99
5'-6"	6 19	7 29	16 61	5 73	4 6	6'-4"	7 30	240	3.19
6'-0"	6 19	7 29	16 61	5 73	4 6	6'-10"	7 32	245	3.35
6'-6"	6 19	7 29	18 68	5 73	4 6	7'-4"	7 34	257	3.52
7'-0"	6 19	7 29	18 68	5 73	4 6	7'-10"	7 37	262	3.69

BILL OF REINFORCING STEEL W=3'-6" 1-5'-0" INLET

"H"	BAR A	BAR C	BAR D	BAR F	BAR J	BAR B	BAR K	*TOTAL STEEL	TOTAL CONC.
NO.	WT.	NO.	WT.	NO.	WT.	NO.	WT.	LBS.	C.Y.
3'-0"	6 21	7 31	11 42	5 73	4 6	3'-10"	7 12	202	2.31
3'-6"	6 21	7 31	13 49	5 73	4 6	4'-4"	7 20	214	2.69
4'-0"	6 21	7 31	13 49	5 73	4 6	4'-10"	7 23	219	2.86
4'-6"	6 21	7 31	15 57	5 73	4 6	5'-4"	7 25	231	3.01
5'-0"	6 21	7 31	15 57	5 73	4 6	5'-10"	7 27	236	3.19
5'-6"	6 21	7 31	17 64	5 73	4 6	6'-4"	7 30	248	3.39
6'-0"	6 21	7 31	17 64	5 73	4 6	6'-10"	7 32	253	3.57
6'-6"	6 21	7 31	19 72	5 73	4 6	7'-4"	7 34	265	3.74
7'-0"	6 21	7 31	19 72	5 73	4 6	7'-10"	7 37	270	3.92



INCREASE IN C.Y. PER FT. "H"

"W"	C.Y./FT.H	"H"	C.Y./FT.W
2'-6"	.315	3'-0"	.315
3'-0"	.333	3'-6"	.333
3'-6"	.352	4'-0"	.352
4'-0"	.371	4'-6"	.370
4'-6"	.389	5'-0"	.389
5'-0"	.408	5'-6"	.408
5'-6"	.426	6'-0"	.426
6'-0"	.445	6'-6"	.445
6'-6"	.463	7'-0"	.463
7'-0"	.481	7'-6"	.482
		8'-0"	.500

QUANTITIES FOR ONE EXTENSION

BAR	SIZE	LENGTH	SPACING	NUMBER	WEIGHT
E	# 4	5'-8"	AS SHOWN	3	11
G	# 4	SEE SCHEDULE	11"	6	34
H	# 6	6'-9"	AS SHOWN	5	51
L	# 6	4'-9"	AS SHOWN	2	14

TOTAL STEEL FOR ONE EXTENSION 110 LBS.
TOTAL CONC. FOR ONE EXTENSION 0.89 C.Y.

† WHERE EXTENSION IS USED WITH CONCRETE PAVEMENT, ADD 27 LBS. OF STEEL FOR BARS M.

GENERAL NOTES: WHERE INLET OR INLET WITH EXTENSION(S) IS USED WITH CONCRETE PAVEMENT WITH INTEGRAL CURB, THE PAVEMENT IS TO BE BLOCKED OUT TO THE DIMENSIONS AS SHOWN FOR THE GUTTER PORTION OF THE INLET OR INLET WITH EXTENSION(S). THE PORTION BLOCKED OUT SHALL BE PLACED INTEGRAL WITH THE TOP OF THE INLET OR INLET WITH EXTENSION(S) AND DEFORMED BARS 30" LONG SHALL BE PLACED ON 18" CENTERS AT THE CENTER OF THE PAVEMENT. THESE BARS SHALL EXTEND INTO THE GUTTER PORTION OF THE INLET OR INLET WITH EXTENSION(S) 15". THE CONSTRUCTION JOINT BETWEEN THE CONCRETE PAVEMENT AND THE INLET OR INLET WITH EXTENSION(S) SHALL BE A KEED JOINT AS SHOWN. A SMOOTH CONSTRUCTION JOINT WILL NOT BE PERMITTED. QUANTITIES FOR BLOCKED OUT AREA OF PAVEMENT SHALL BE INCLUDED IN QUANTITIES FOR INLET OR INLET WITH EXTENSION(S).

THE STANDARD SPECIFICATIONS ADOPTED BY THE MISSISSIPPI STATE HIGHWAY DEPARTMENT SHALL APPLY TO ALL ITEMS ON THIS SHEET.

THE QUANTITIES SHOWN ARE VOLUMETRIC DISPLACEMENT OF CONCRETE BY PIPE GULVERTS THROUGH INLET WALLS. WILL BE USED AS THE BASIS FOR FINAL PAYMENT UNLESS THIS PLAN IS MODIFIED.

FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLE ARE INCREMENTS OF 6" (INCHES), BUT ANY DEPTHS OTHER THAN THESE SHOWN MAY BE USED WHENEVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS, FALLING WITHIN THE LIMITS OF THE TABLE, MAY BE FOUND BY INTERPOLATION.

FIELD CUT AND BOND BARS AS NECESSARY TO ACCOMMODATE STORM SEWER. NO DEDUCTIONS ARE TO BE MADE IN STEEL QUANTITIES.

NO ADDITIONAL QUANTITIES WILL BE ALLOWED FOR YARD INLET OPENING.

The bars in the area of lip of curb inlet were changed from #6 to #4. #6 #6 bars are too large and cause problems. If equipment hits, it tears up the concrete. Also there were originally 3 bars in this spot which proved to be oversized.

STORM SEWER STRUCTURE TYPE SS-2
DATE: 12/17/99 APPR. BY: BCM REVISION DATE BY
SCALE: N.T.S. DR. NO.: 02721-B
DR. BY: CITY OF GULFPORT STANDARD CONSTRUCTION DETAILS

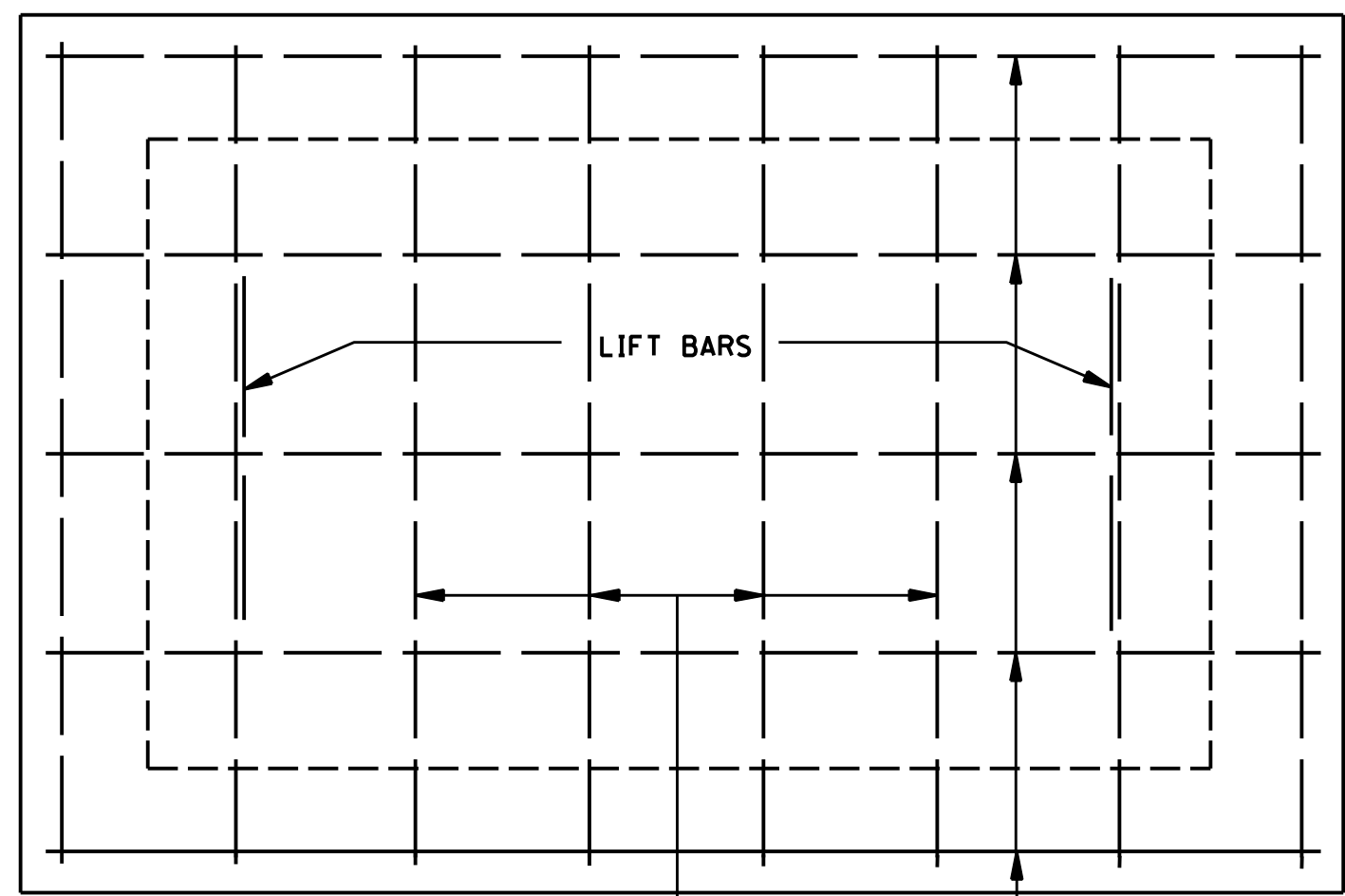


NOTICE TO DRAWING HOLDER
NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

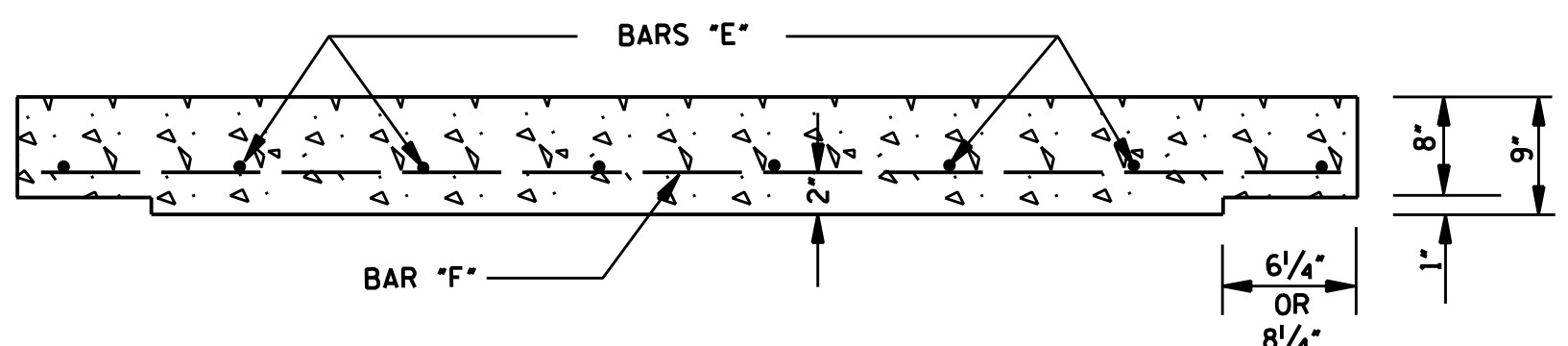
REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: -----
				DSGN: JLD DATE: -----
				DRWN: JTD DATE: -----
				CHKD: JLD DATE: -----
				QA/QC: DLS DATE: -----

DRAINAGE IMPROVEMENTS ON 18TH STREET AT US49 TO BRICKYARD BAYOU
CITY OF GULFPORT
GULFPORT, MISSISSIPPI

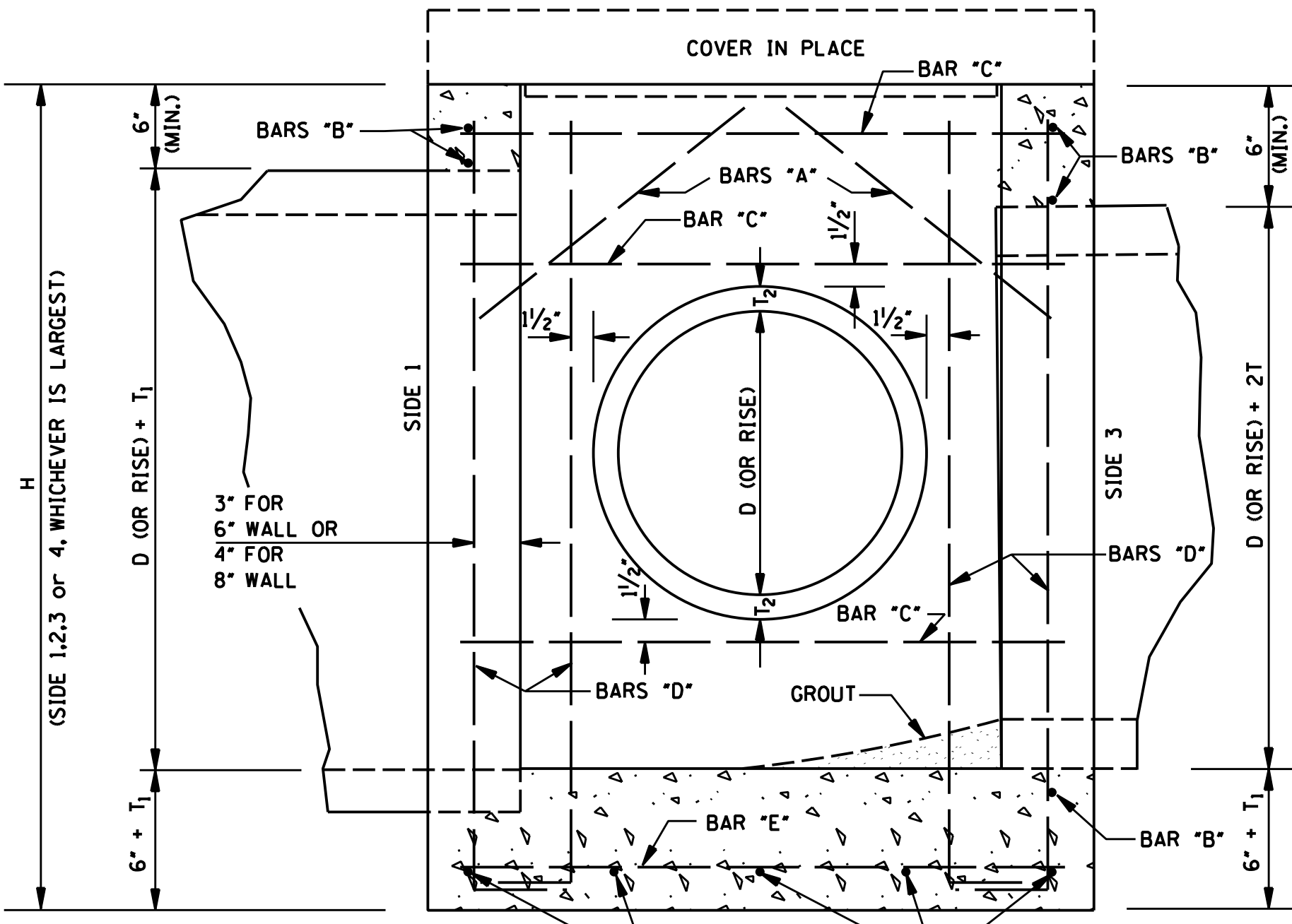
DRAINAGE DETAILS
WORKING NUMBER: DET-2
DRAWING NUMBER: 25



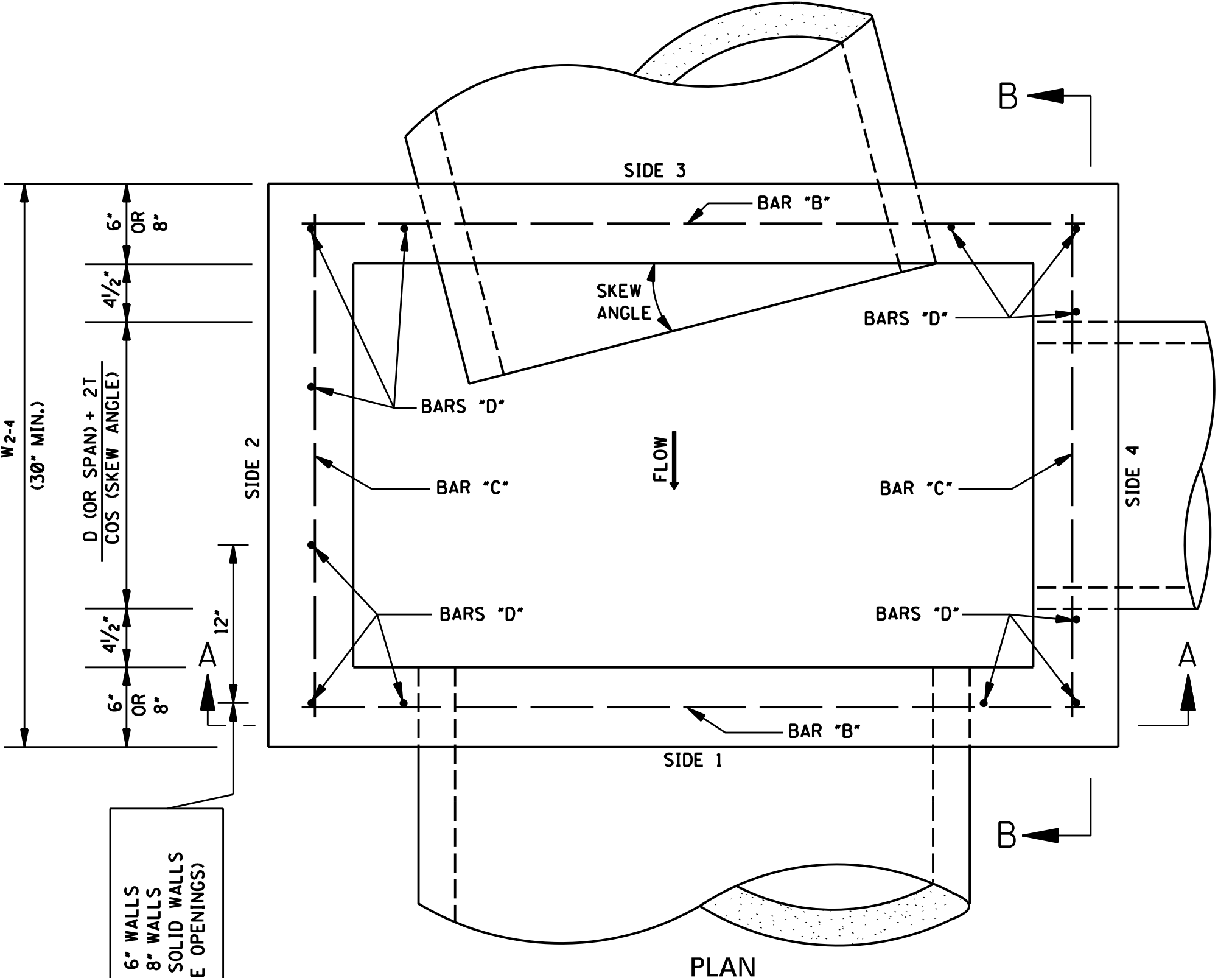
PLAN OF COVER



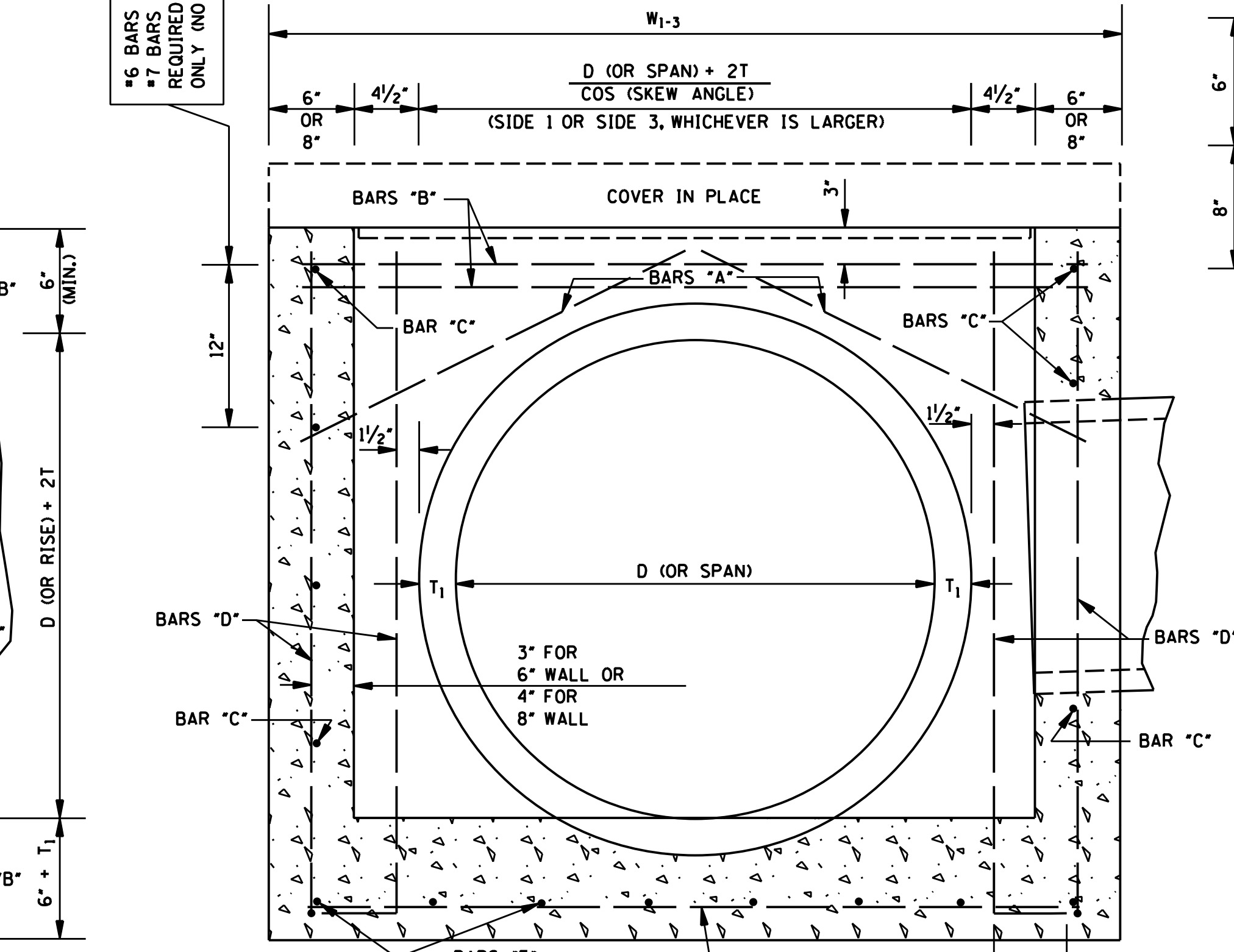
ELEVATION OF COVER



SECTION B-B



PLAN



SECTION A-A

#6 BARS FOR 6" WALLS
#7 BARS FOR 8" WALLS
REQUIRED ON SOLID WALLS
ONLY (NO PIPE OPENINGS)

REINFORCING BAR LIST			
BAR	SIZE	NUMBER REQUIRED	LENGTH
"A"	#4	2 PER PIPE OPENING	$\sqrt{196 + \left(\frac{W}{2} + 2\right)^2}$
"B"	#6 FOR 6" WALL	2 + (2 PER OPENING SIDE 3) + (1 PER SIDE 1) + (12" O.C. FOR SOLID WALL)	$W_{1-3} - 4'$
"C"	#7 FOR 8" WALL	2 + (2 PER OPENING) + (12" O.C. FOR SOLID WALL)	$W_{2-4} - 4'$
"D"	#4	4 + (2 PER OPENING) + (12" O.C. FOR SOLID WALL)	H
"E"	#6	$2 \left[\left(\frac{W_{1-3}}{6} \right) + 1 \right]$	$W_{2-4} - 4'$
"F"	#6	$2 \left[\left(\frac{W_{2-4}}{6} \right) + 1 \right]$	$W_{1-3} - 4'$

NOTE: VARIABLES AND DESIGNATIONS ARE AS FOLLOWS:
D (OR SPAN) = PIPE DIAMETER (OR SPAN)
W₁₋₃ = WIDTH OF SIDE 1 & SIDE 3
W₂₋₄ = WIDTH OF SIDE 2 & SIDE 4
W* = W₁₋₃ OR W₂₋₄ (SIDE OF ENTERING PIPE)
** = ROUND TO NEAREST WHOLE NUMBER

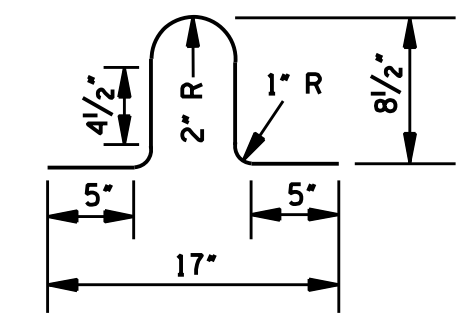
CL. "B" CONC. (yd³) = [(Q1 + Q2) / 46,656] - Σ PIPE OPENING DEDUCTIONS
WHERE: 6" WALL
Q1 = [8"W₁₋₃W₂₋₄] + [1*(W₁₋₃ - 12.5*)(W₂₋₄ - 12.5*)] + [(T₁ + 6")W₁₋₃W₂₋₄]
Q2 = 12"(H - (T₁ + 6"))[(W₁₋₃ - 12") + W₂₋₄]
OR: 8" WALL
Q1 = [8"W₁₋₃W₂₋₄] + [1*(W₁₋₃ - 16.5*)(W₂₋₄ - 16.5*)] + [(T₁ + 6")W₁₋₃W₂₋₄]
Q2 = 16"(H - (T₁ + 6"))[(W₁₋₃ - 16") + W₂₋₄]

COMMON PIPE SIZE							
CIRCULAR PIPE				ARCH PIPE			
PIPE SIZE	T	PIPE OPENING DEDUCTION (yd ³)		PIPE SIZE	T	PIPE OPENING DEDUCTION (yd ³)	
		6" WALL	8" WALL			6" WALL	8" WALL
18"	2 1/2"	0.053	0.071	22" X 13"	2 1/2"	0.053	0.071
24"	3"	0.091	0.121	29" X 18"	3"	0.087	0.116
30"	3 1/2"	0.138	0.184	36" X 23"	3 1/2"	0.129	0.172
36"	4"	0.196	0.261	44" X 27"	4"	0.185	0.247
42"	4 1/2"	0.263	0.350	51" X 31"	4 1/2"	-	0.327
48"	5"	-	0.453	58" X 36"	5"	-	0.424
54"	5 1/2"	-	0.569	65" X 40"	5 1/2"	-	0.525
60"	6"	-	0.699	73" X 45"	6"	-	0.652
66"	6 1/2"	-	0.840				
72"	7"	-	0.996				

* NOTE: IF ANY PIPE REQUIRING A 8" WALL IS USED, ALL WALLS SHALL BE 8" REGARDLESS OF PIPE SIZE.

GENERAL NOTES:

- REINFORCING STEEL QUANTITIES TO BE COMPUTED FROM BAR LIST AND SHOWN ELSEWHERE ON THE PLANS.
- QUANTITIES FOR JUNCTION BOXES SHOWN ON THE PLANS WILL BE THE BASIS FOR PAYMENT UNLESS AUTHORIZED MODIFICATIONS ARE MADE.
- CONCRETE SHALL BE CLASS "B" AND REINFORCING STEEL SHALL BE DEFORMED BARS, ASTM A 615, GRADE 60 OR AASHTO M 31, GRADE 60.
- SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
- IF PIPES ARE SKEWED MORE THAN 15° OR IF SKEWED PIPES PRODUCE CONFLICTS WITH ANOTHER OPENING, THE PIPE SHALL BE BROKEN BACK TO THE WALL OF THE JUNCTION BOX.



LIFT BAR

NOTE: LIFT BAR TO BE FABRICATED FROM A #4 BAR 30" LONG. TWO LIFT BARS ARE REQUIRED. REINFORCING STEEL FOR 2 LIFT BARS = 3.3 lbs.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	00.14470.00
				FILENAME:	DETAILS.DGN
				SCALE:	NTS
				SURVEYED BY:	
				DSGN:	JLD DATE:
				DRWN:	JTD DATE:
				CHKD:	JLD DATE:
				QA/QC:	DLS DATE:

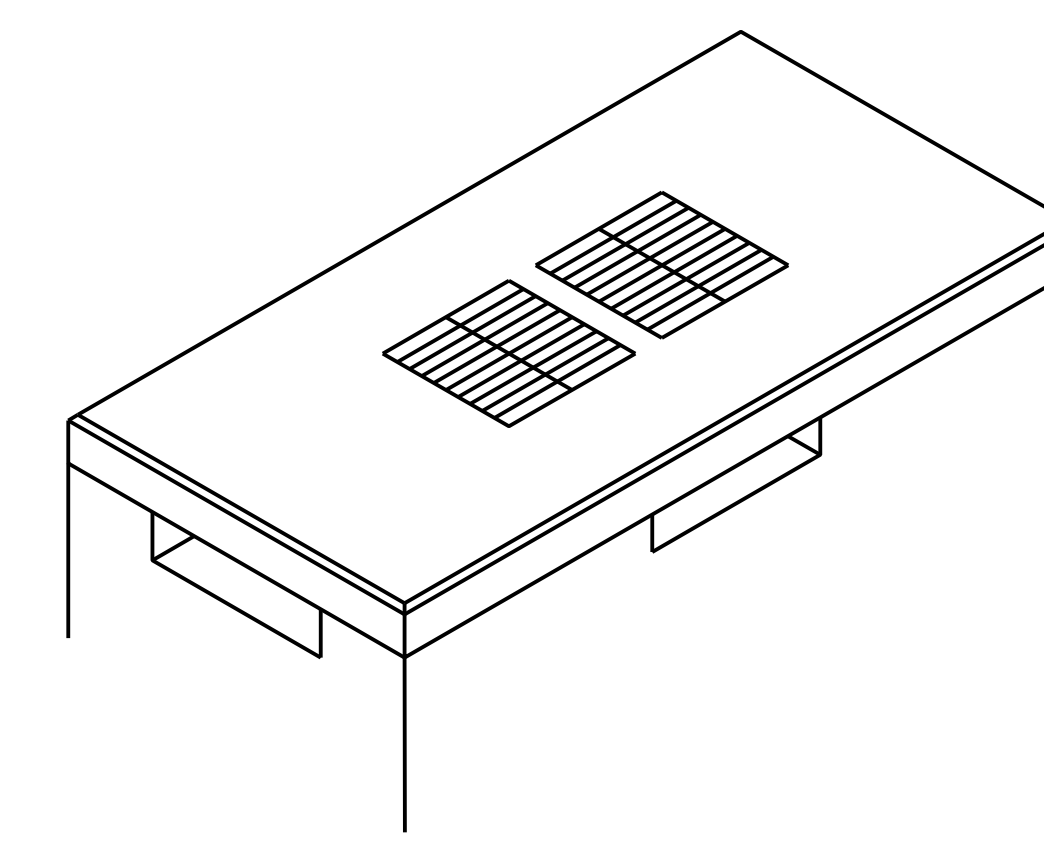
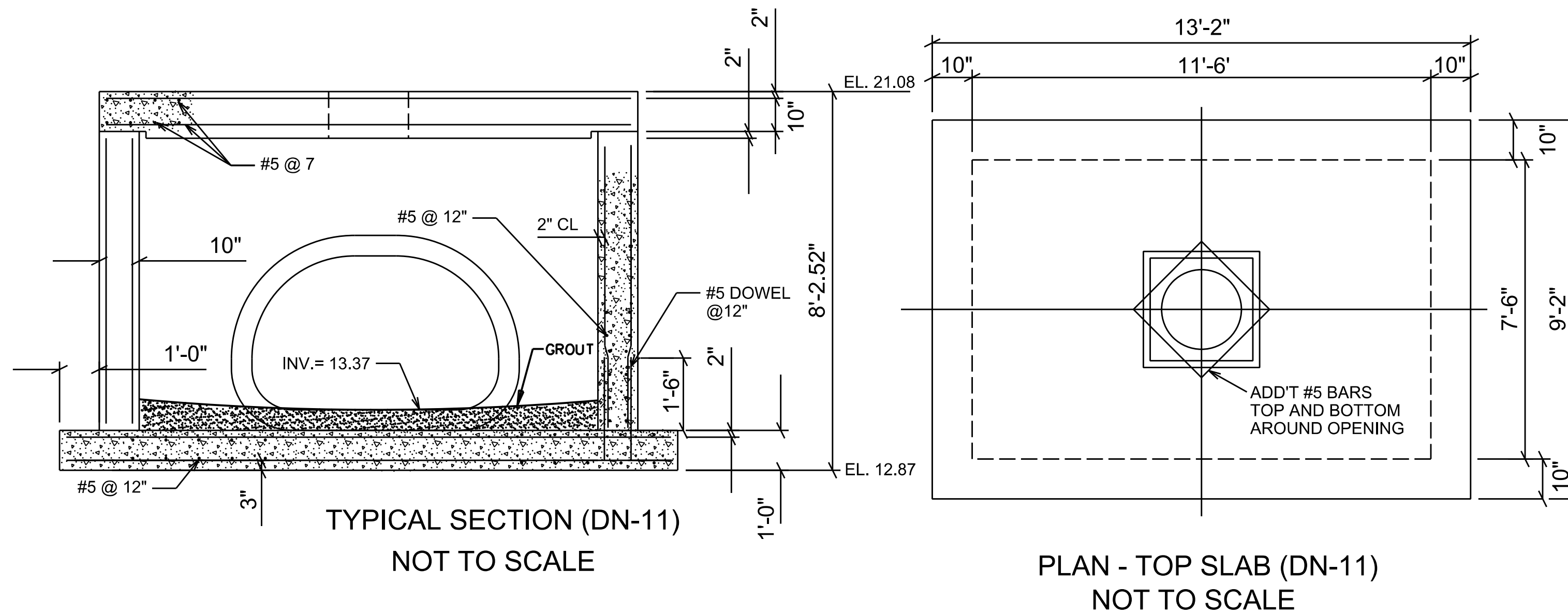
DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU

CITY OF GULFPORT
GULFPORT, MISSISSIPPI

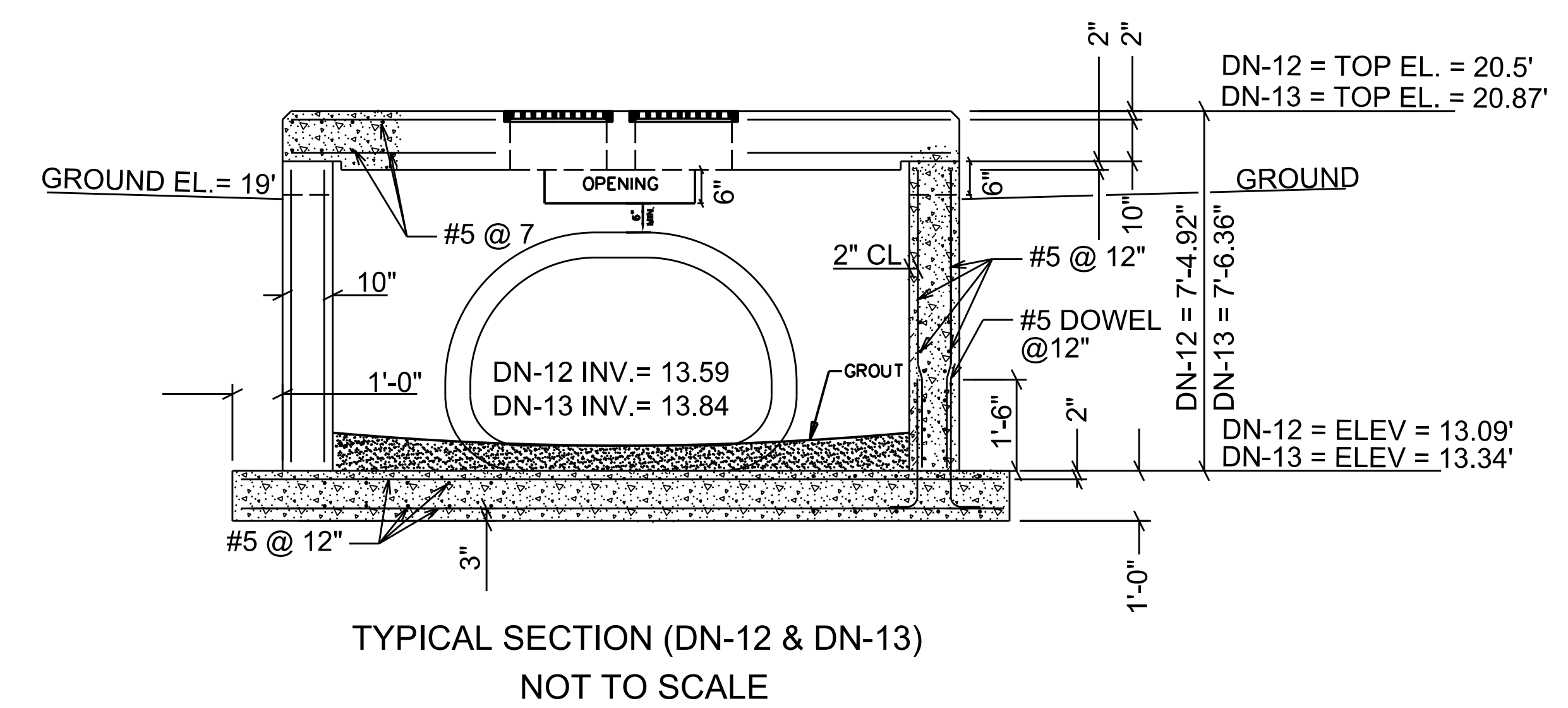
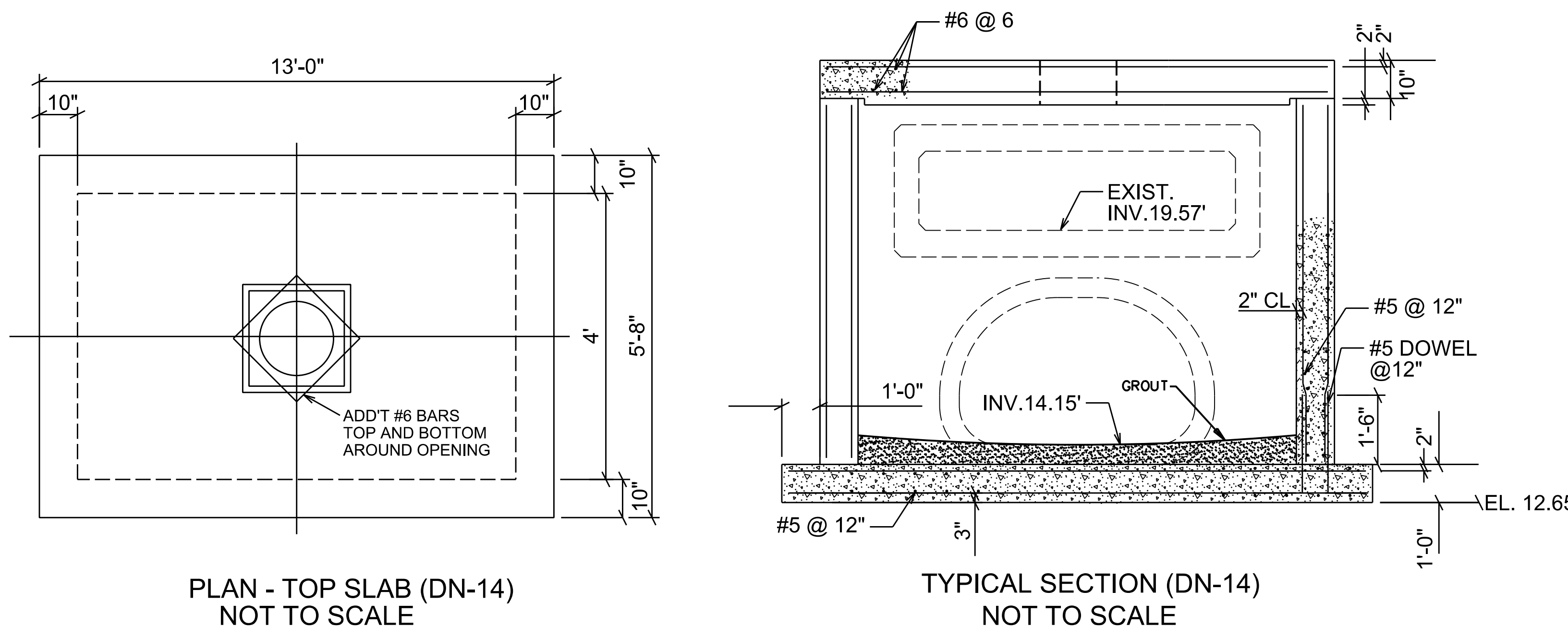
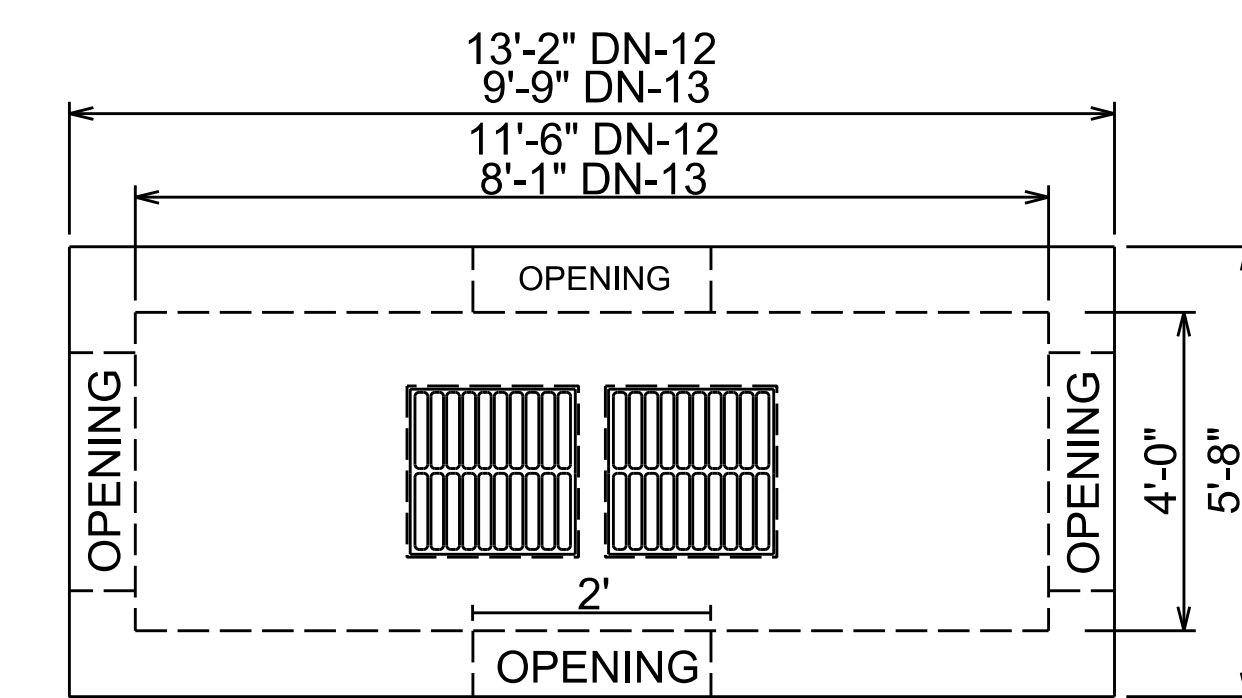


JUNCTION BOX
FOR PIPE CULVERTS

WORKING NUMBER: DET-3 DRAWING NUMBER: 26



NOTE:
ALL REBAR AND HATCHING
NOT SHOWN FOR CLARITY.



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	00.14470.00
				FILENAME:	DETAILS.DGN
				SCALE:	NTS
				SURVEYED BY:	
				DSGN:	JLD DATE:
				DRWN:	JTD DATE:
				CHKD:	JLD DATE:
				QA/QC:	DLS DATE:

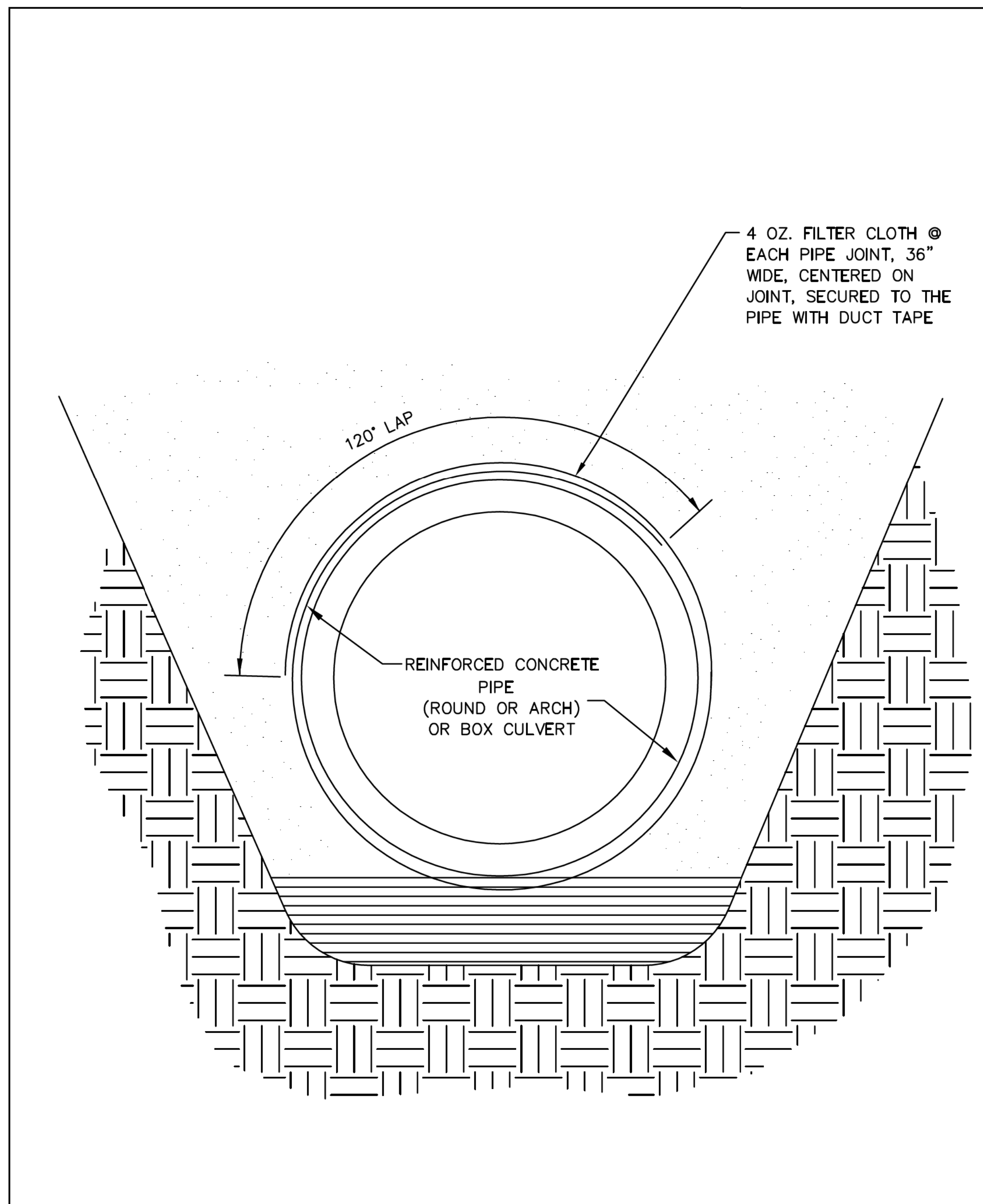
**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI

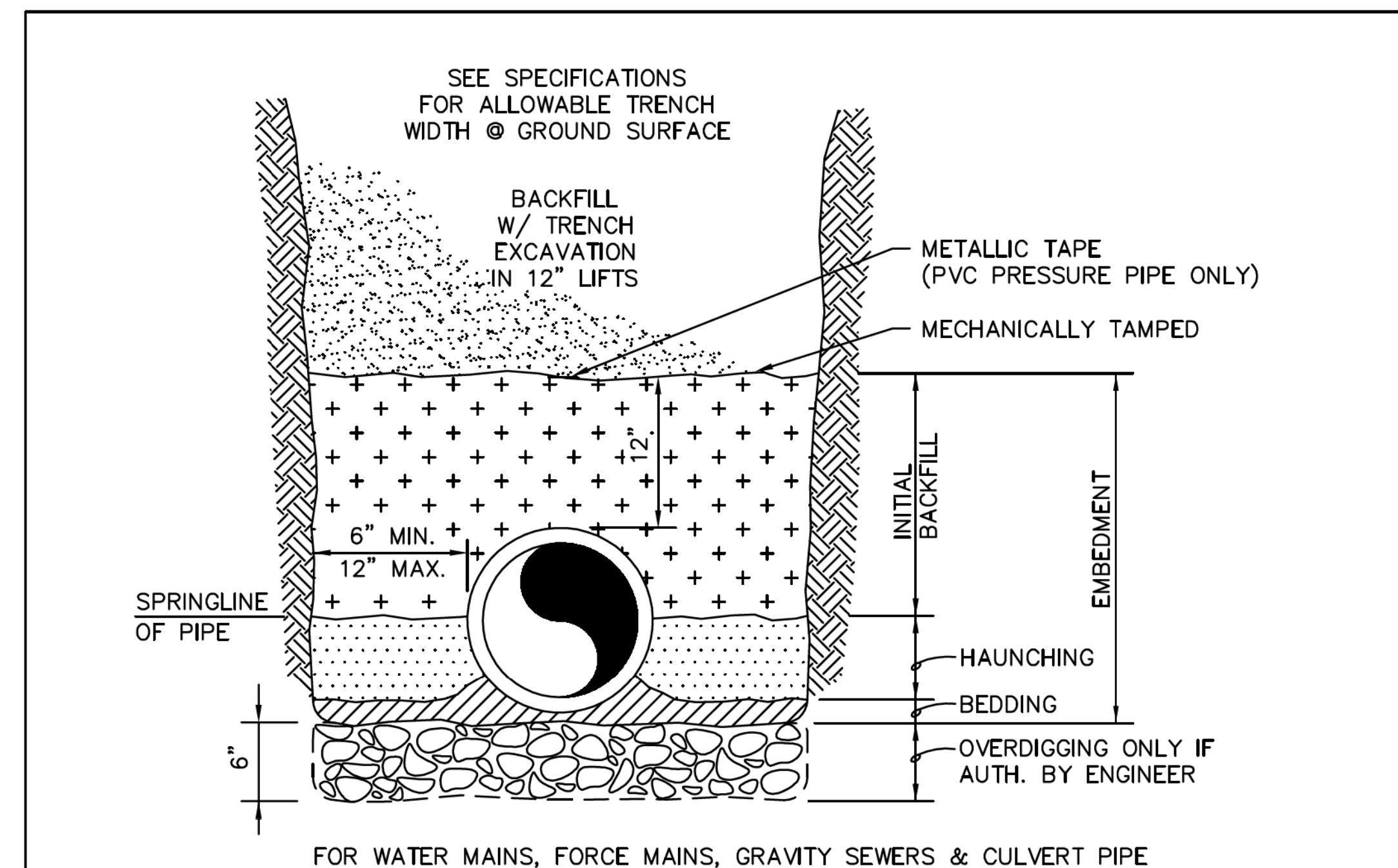


**JUNCTION BOX
DETAILS**

WORKING NUMBER: DET-4
DRAWING NUMBER: 27



STORM DRAIN PIPE WRAP				
DATE: 11/3/97	APPR. BY: BCM	REVISION	DATE	BY
SCALE: N.T.S.	DR. NO.: 02722 DWG.-1			
DR. BY:	PILE: PIPEWRAP			
CITY OF GULFPORT STANDARD CONSTRUCTION DETAILS				



PIPE EMBEDMENT AND BACKFILL

Should Engineer determine that the native material at the bottom of the trench is not a suitable foundation for the pipe, he may authorize overdigging the trench a depth of 6 inches and replace with a suitable foundation material which is included in the contract as a pay item.

Generally, loose material left by the excavator on the trench bottom and soft material shaved from the trench excavation will be adequate for bedding the pipe so that it is fully supported. The haunching material shall be select material secured from the trench excavation and thoroughly compacted to the spring line of the pipe and extending to the side walls of the trench. A minimum 90 percent Standard Proctor will be considered adequate compaction. The initial backfill (select material secured from the trench excavation) may then proceed to a height of 12 inches above the top of the pipe and mechanically tamped. Further backfill shall not proceed until initial backfill has been observed by Engineer.

Should Engineer determine that the select material secured from the trench excavation is not suitable for embedment and/or backfill, he may authorize the use of a suitable backfill material which is included in the contract as a pay item.

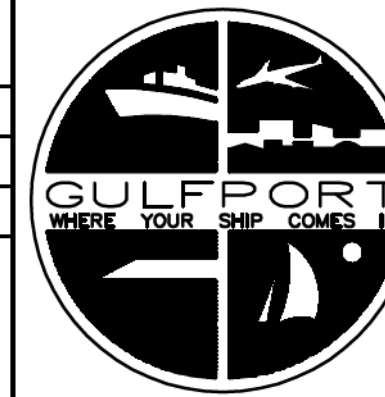
Further backfill may then proceed to the original ground surface in 12 inch lifts compacted to eliminate air voids. In areas where the ground surface is to receive pavement, a minimum 90 percent Standard Proctor for each lift shall be considered adequate compaction.

Contractor shall maintain trench backfill at original ground surface until final acceptance of the Work.

All surplus materials not used in backfilling shall be removed and disposed of by Contractor at his own expense.

Metallic tape will be placed in the backfill 12 inches above the top of PVC water mains and sewage force mains with lettering facing up. PVC sanitary sewers do not require marking tape.

PIPE EMBEDMENT & BACKFILL				
DATE: 7/31/97	APPR. BY: BCM	REVISION	DATE	BY
SCALE: N.T.S.	DR. NO.: 02660			
DR. BY:	FILE: PIPEBED2			
CITY OF GULFPORT STANDARD CONSTRUCTION DETAILS				



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

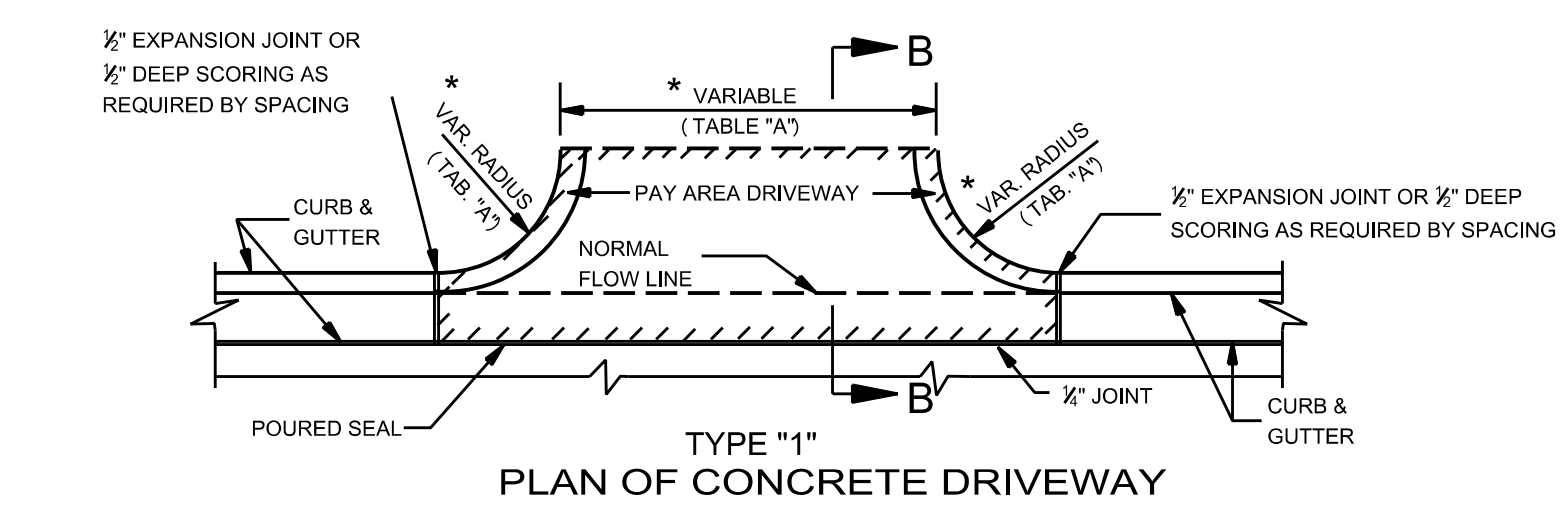
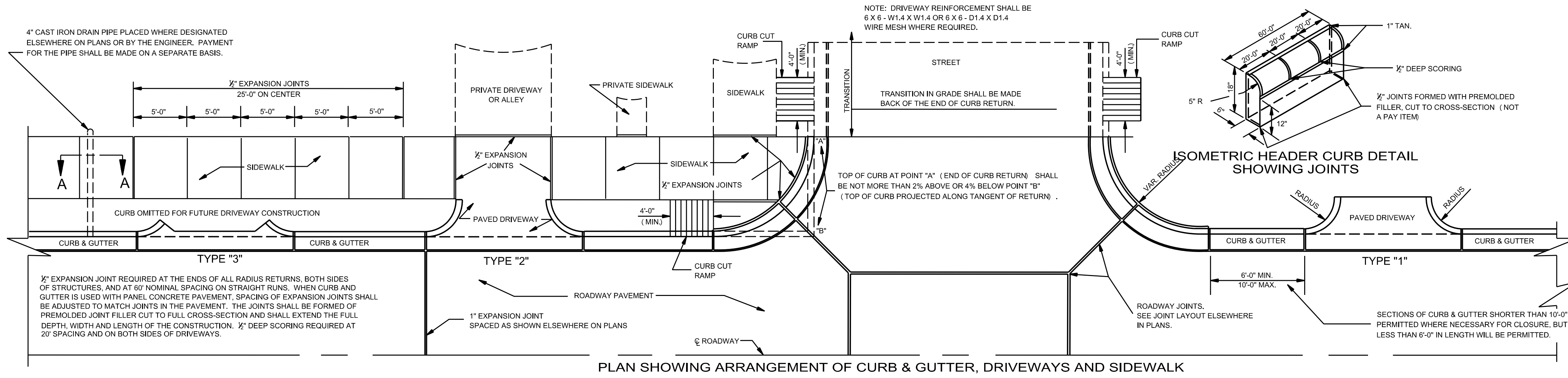
REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: DLS DATE: _____

**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

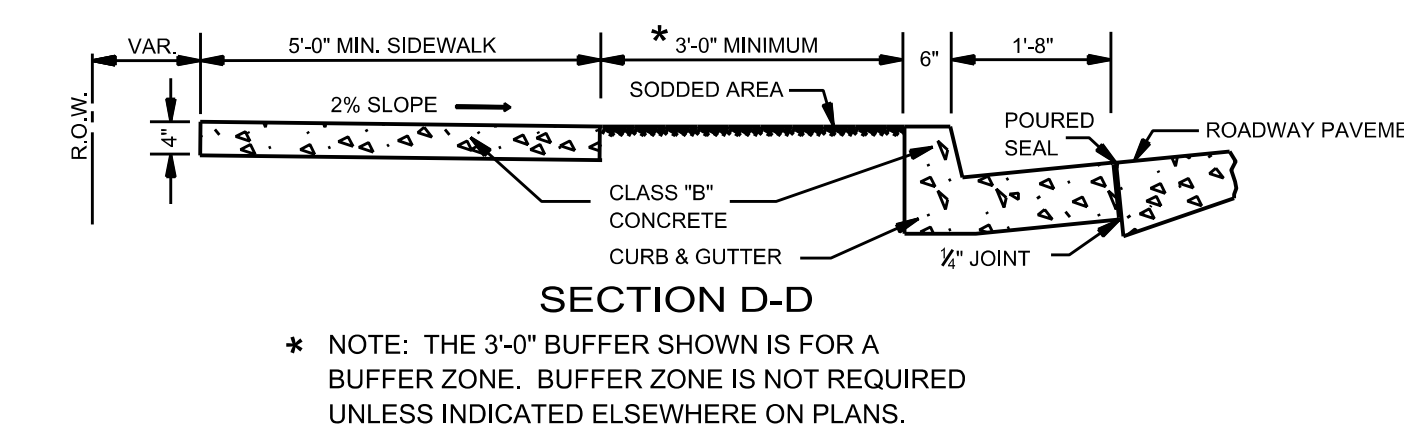
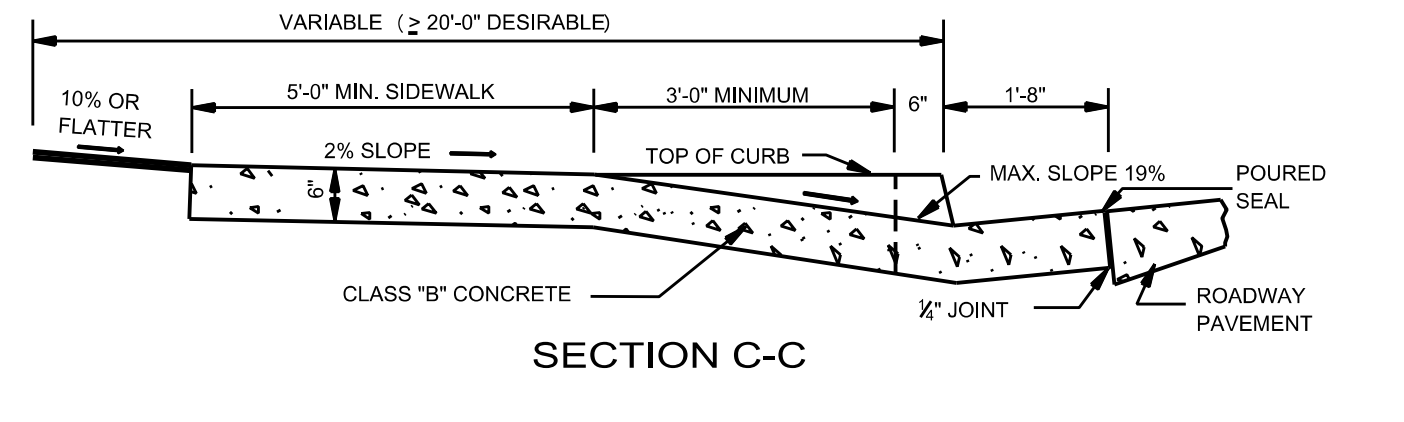
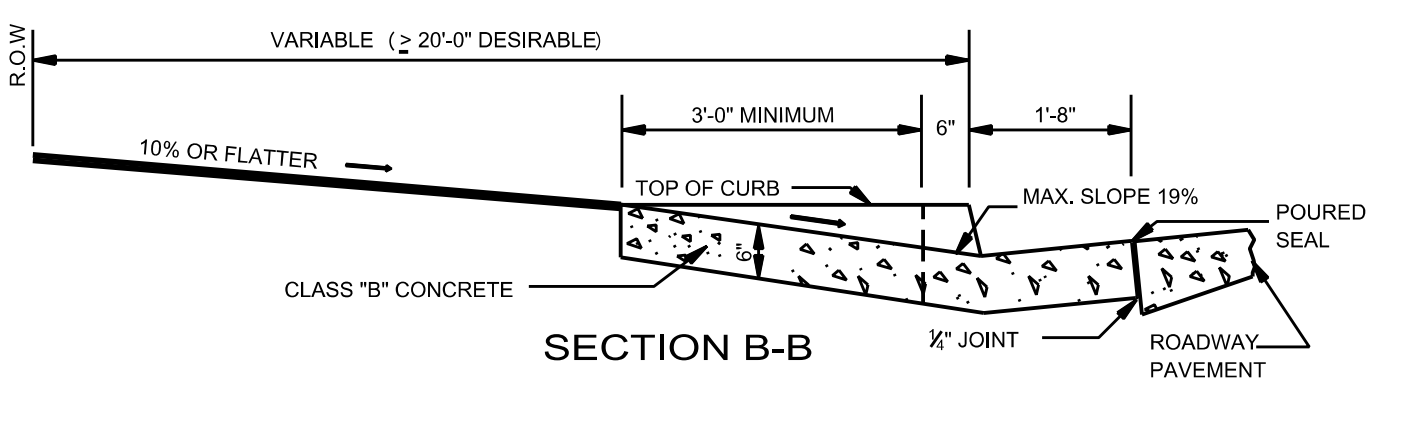
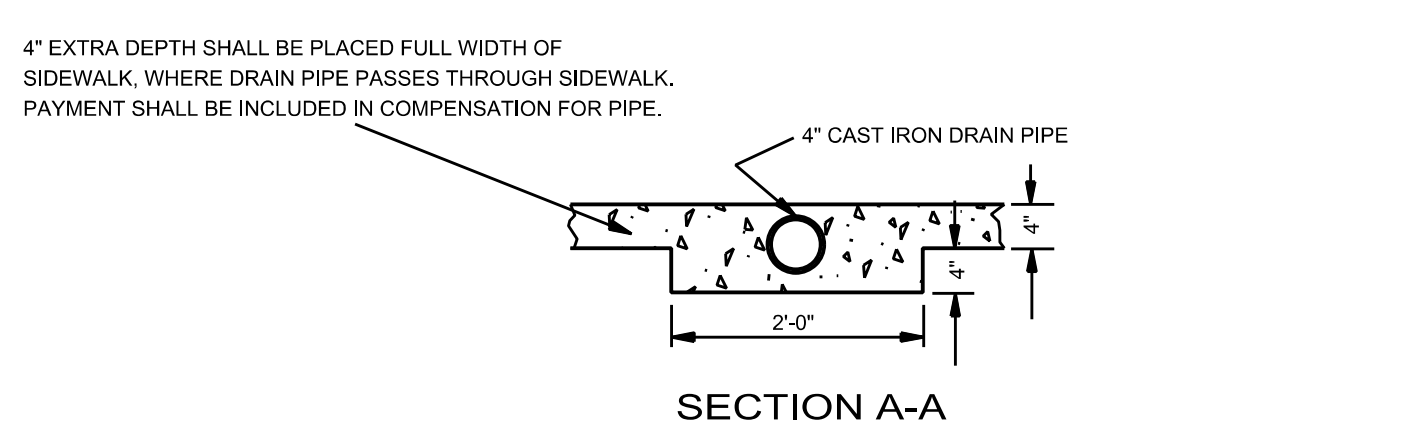
CITY OF GULFPORT
GULFPORT, MISSISSIPPI



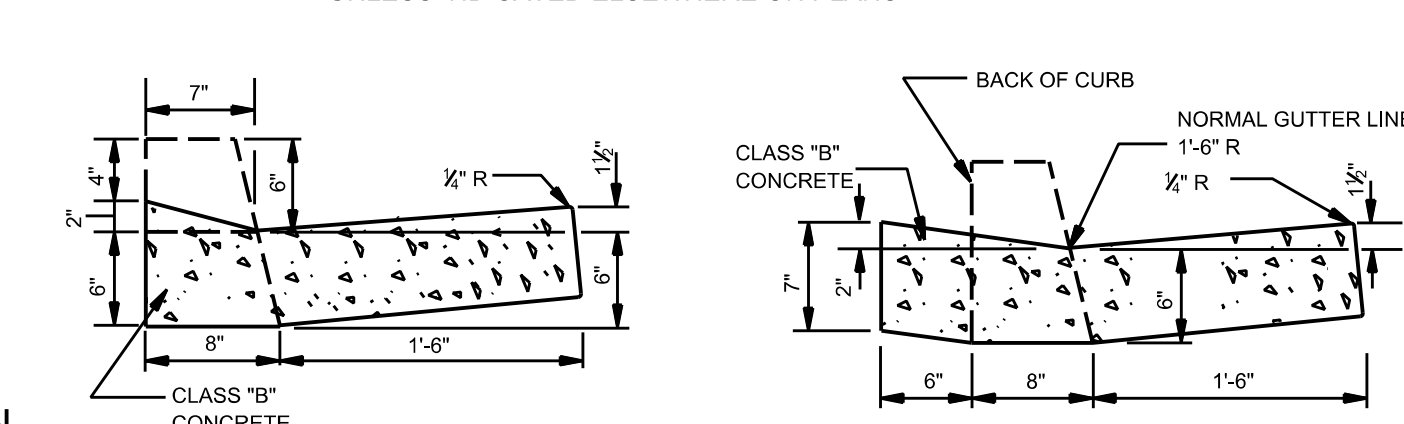
DRAINAGE DETAILS	
WORKING NUMBER:	DRAWING NUMBER:
DET-6	29



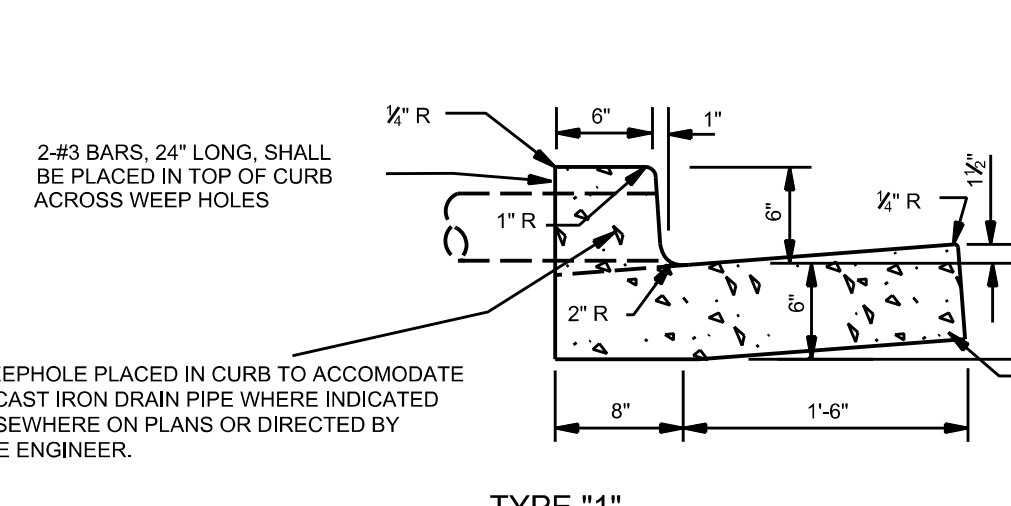
*TABLE "A"		
DRIVEWAY TYPE	DRIVEWAY WIDTH (ft)	CURB RETURN RADIUS (ft)
RESIDENTIAL	16'	3' - 10'
COMMERCIAL/ INDUSTRIAL	30' - 50'	5' - 30'



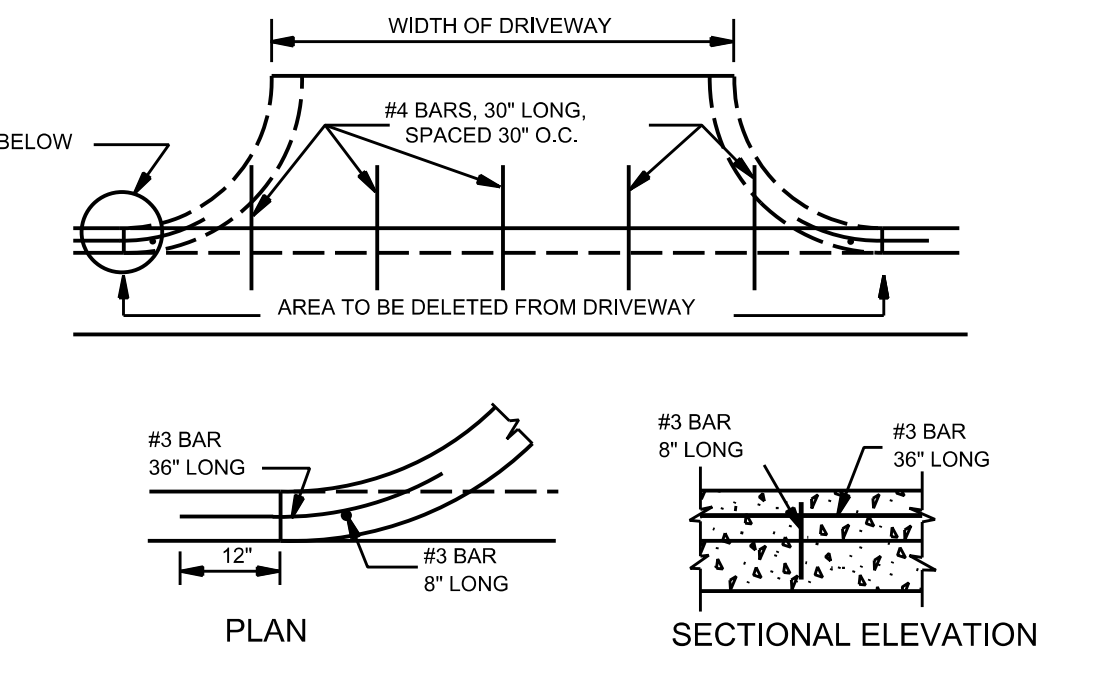
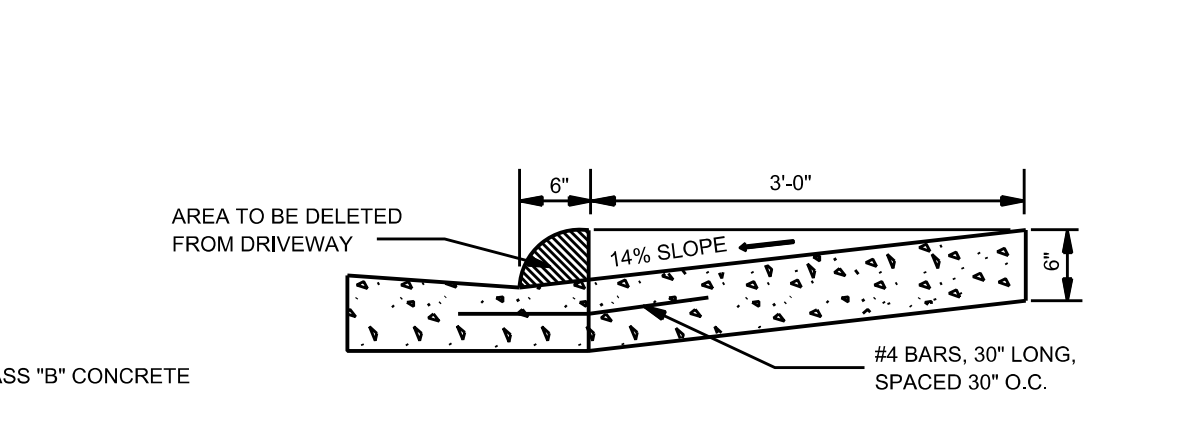
* NOTE: THE 3'-0" BUFFER SHOWN IS FOR A BUFFER ZONE. BUFFER ZONE IS NOT REQUIRED UNLESS INDICATED ELSEWHERE ON PLANS.



DETAIL OF VALLEY GUTTER

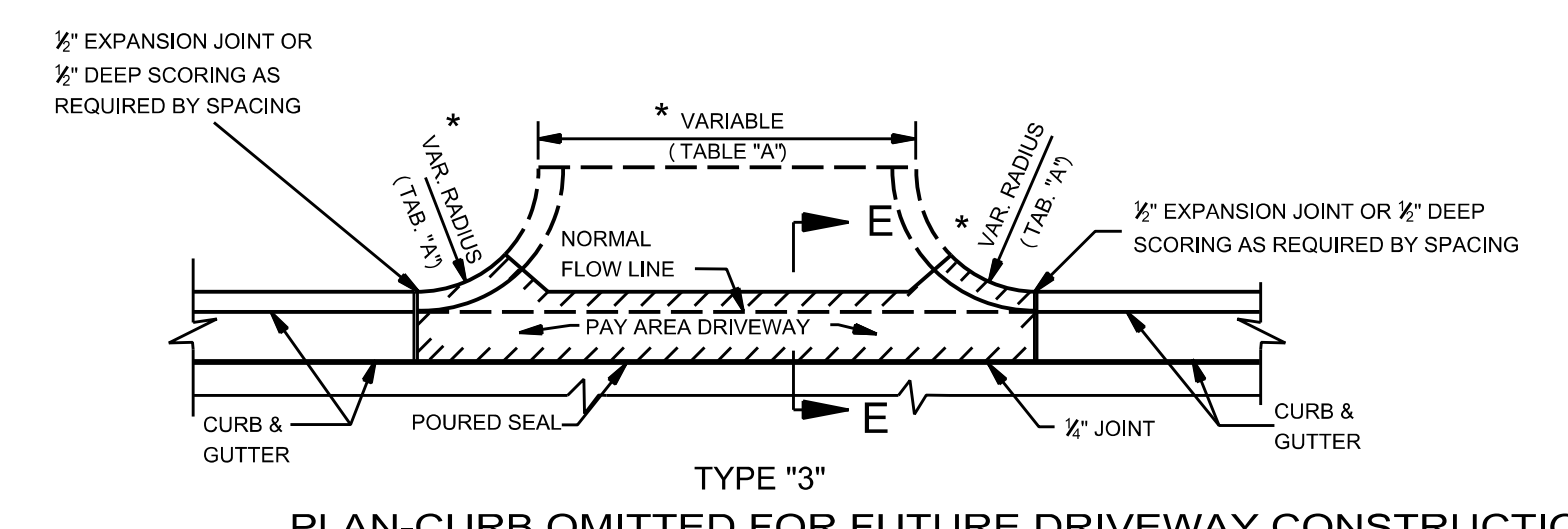


TYPE "1" DETAIL OF COMBINATION CURB & GUTTER



PERMISSIBLE DRIVEWAY CONSTRUCTION METHOD FOR SLIP-FORM PLACEMENT OF CURB & GUTTER

- GENERAL NOTES:
1. THE STANDARD SPECIFICATIONS ADOPTED BY THE MISSISSIPPI DEPARTMENT OF TRANSPORTATION SHALL, UNLESS OTHERWISE SPECIFIED HEREIN, APPLY TO ALL ITEMS INCLUDED ON THIS DRAWING.
 2. TRANSVERSE CONTRACTION JOINTS ARE REQUIRED AT 20' ON CENTER FOR ALL CONCRETE DRIVEWAYS THAT EXTEND PAST THE END OF THE CURB RETURN. A 1/2" WIDE EXPANSION JOINT IS REQUIRED AT THE END OF THE CURB RETURN AND AT 60' ON CENTER THROUGHOUT THE LENGTH OF THE DRIVEWAY. A LONGITUDINAL CONTRACTION JOINT IS REQUIRED FOR ALL DRIVEWAYS EXCEEDING 20' IN WIDTH.
 3. SEE SHEET CCR-1 FOR DETAILS OF CURB-CUT RAMPS.



PLAN-CURB OMITTED FOR FUTURE DRIVEWAY CONSTRUCTION

NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	00.14470.00
				FILENAME:	DETAILS.DGN
				SCALE:	NTS
				SURVEYED BY:	
				DSGN:	JLD DATE:
				DRWN:	JTD DATE:
				CHKD:	JLD DATE:
				QA/QC:	DLS DATE:

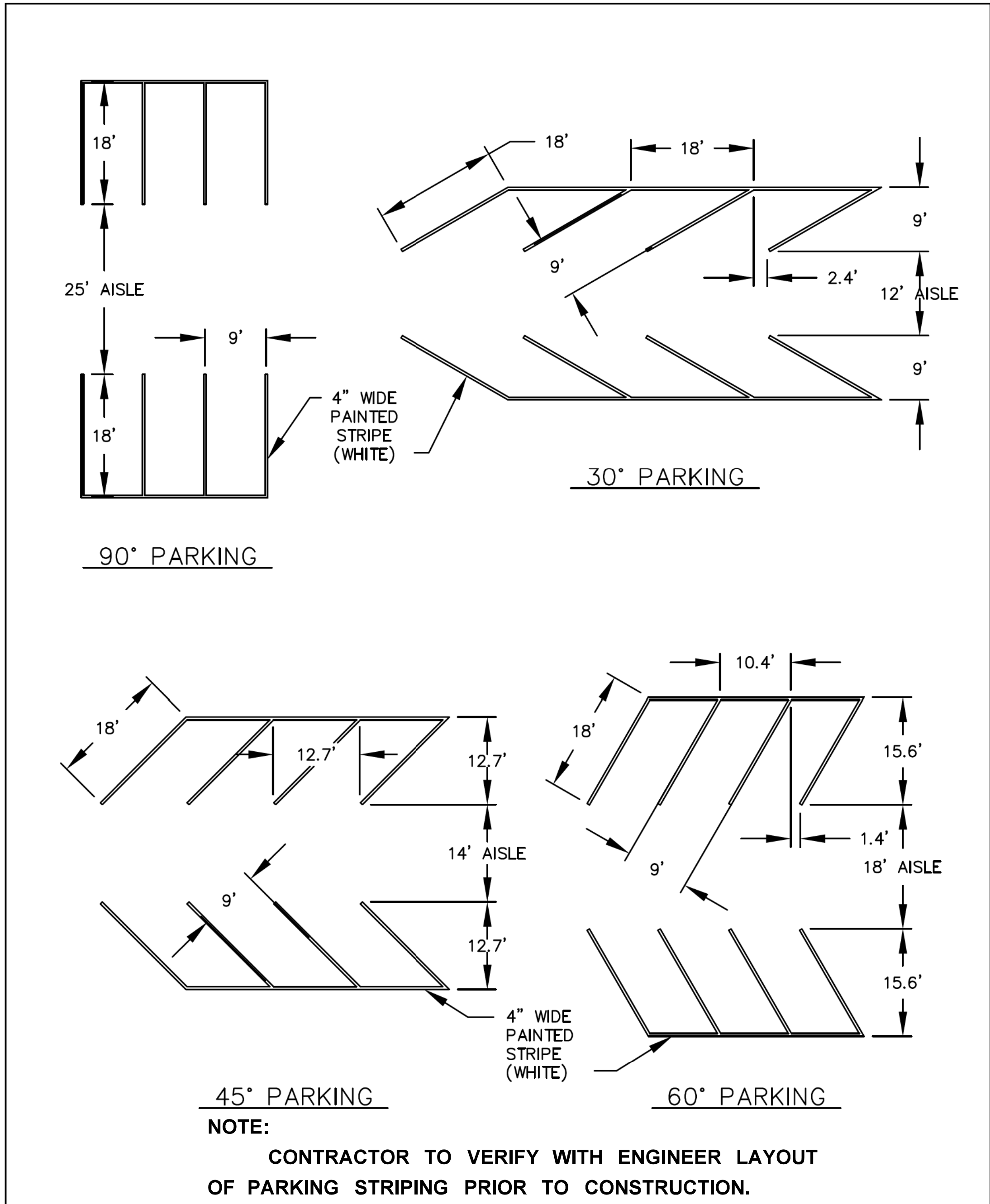
DRAINAGE IMPROVEMENTS ON 18TH STREET AT US49 TO BRICKYARD BAYOU

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



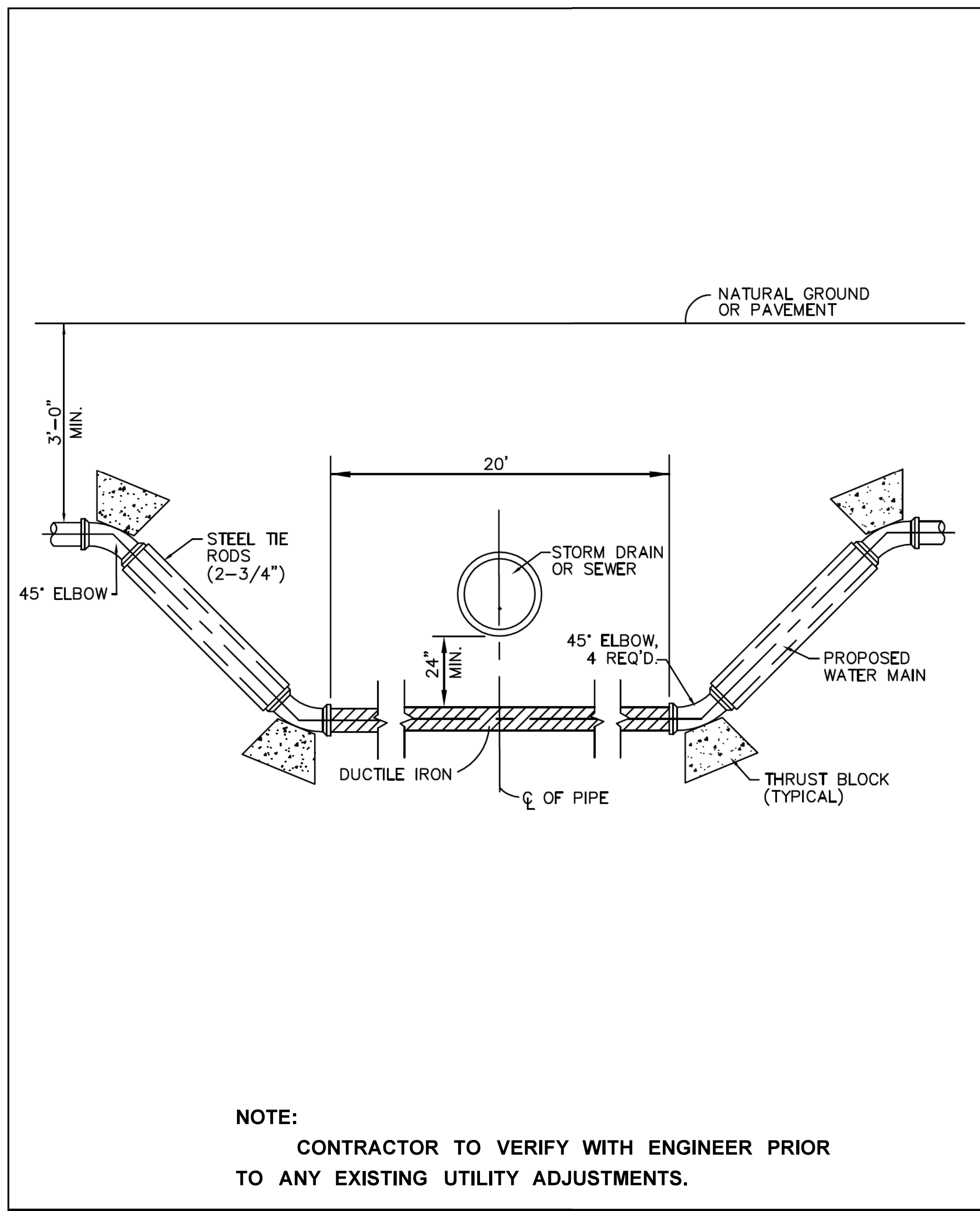
DRIVEWAY, CURB & GUTTER, SIDEWALK

WORKING NUMBER:	DRAWING NUMBER:
DET-7	30



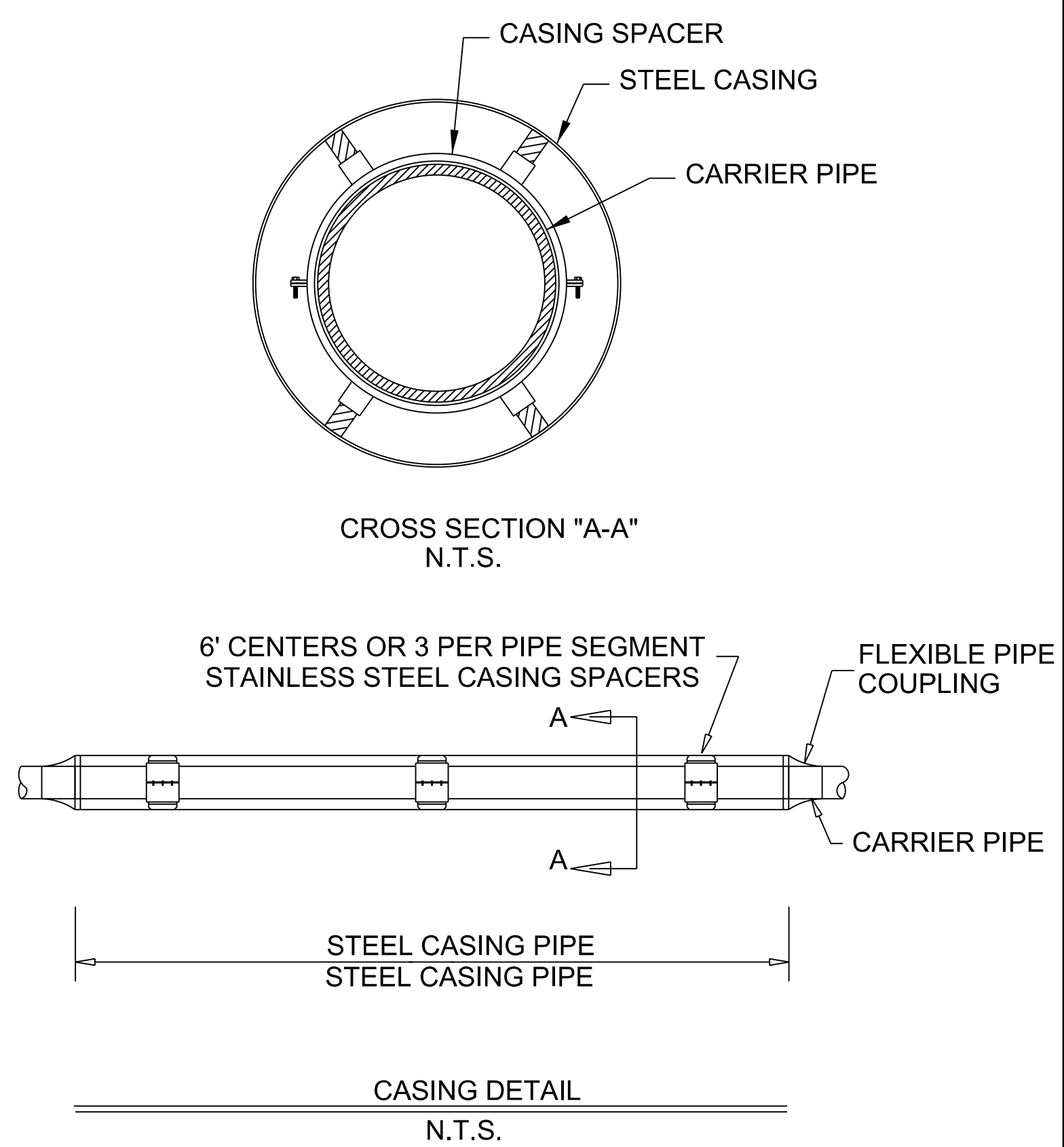
STANDARD PARKING DETAIL				
DATE: 2/15/01	APPR. BY: BCM	REVISION	DATE	BY
SCALE: 1"=20'	DR. NO.: 02580			
DR. BY: SJ	FILE: PARK			

CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS



WATER MAIN ADJUSTMENT				
DATE: 1/10/94	APPR. BY: BCM	REVISION	DATE	BY
SCALE: N.T.S.	DR. NO.: 02660	ADDED THRUST BLOCKS AND STEEL TIE RODS	5/15/00	SJ
DR. BY:	FILE: WTRADJUST			

CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	00.14470.00
				FILENAME:	DETAILS.DGN
				SCALE:	N.T.S.
				SURVEYED BY:	-----
				DSGN:	JLD DATE: -----
				DRWN:	JTD DATE: -----
				CHKD:	JLD DATE: -----
				QA/QC:	DLS DATE: -----

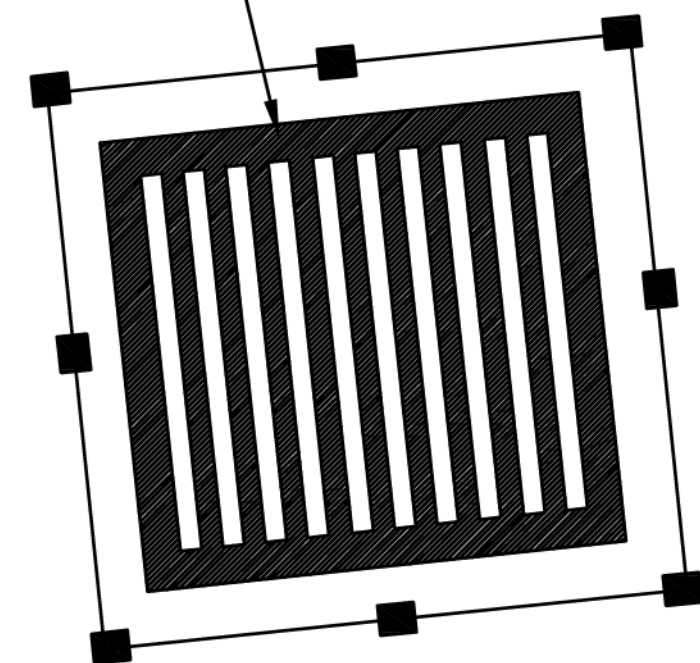
**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



MISCELLANEOUS DETAILS	
WORKING NUMBER:	DRAWING NUMBER:
DET-8	31

DROP INLET WITH GRATE



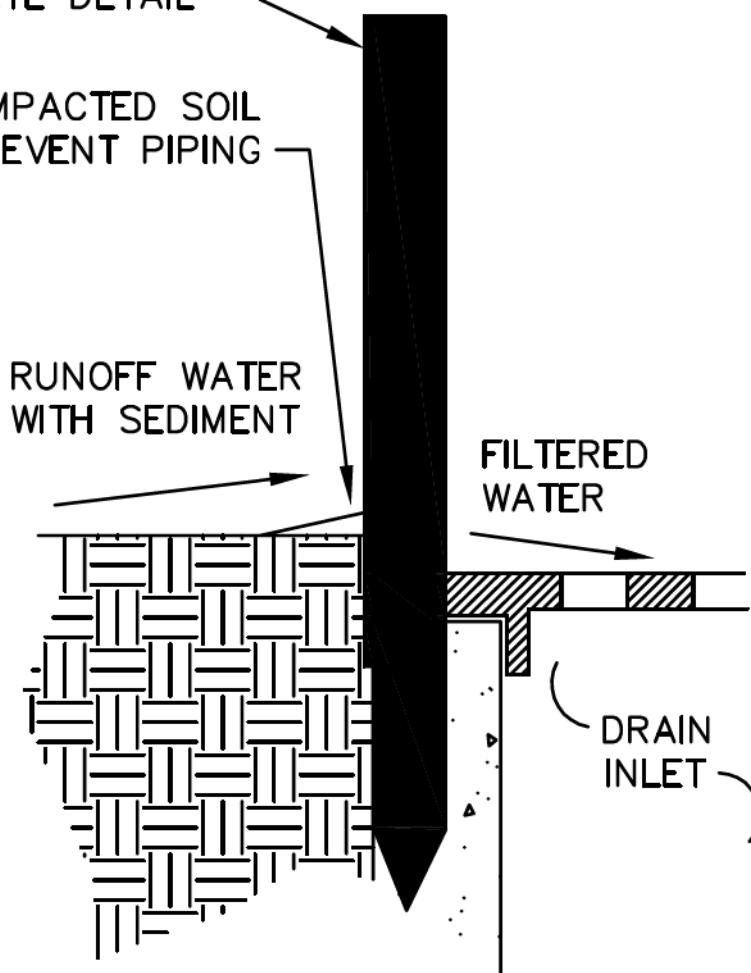
SILT FENCE INSTALLED PER SEPARATE DETAIL

COMPACTED SOIL TO PREVENT PIPING

RUNOFF WATER WITH SEDIMENT

FILTERED WATER

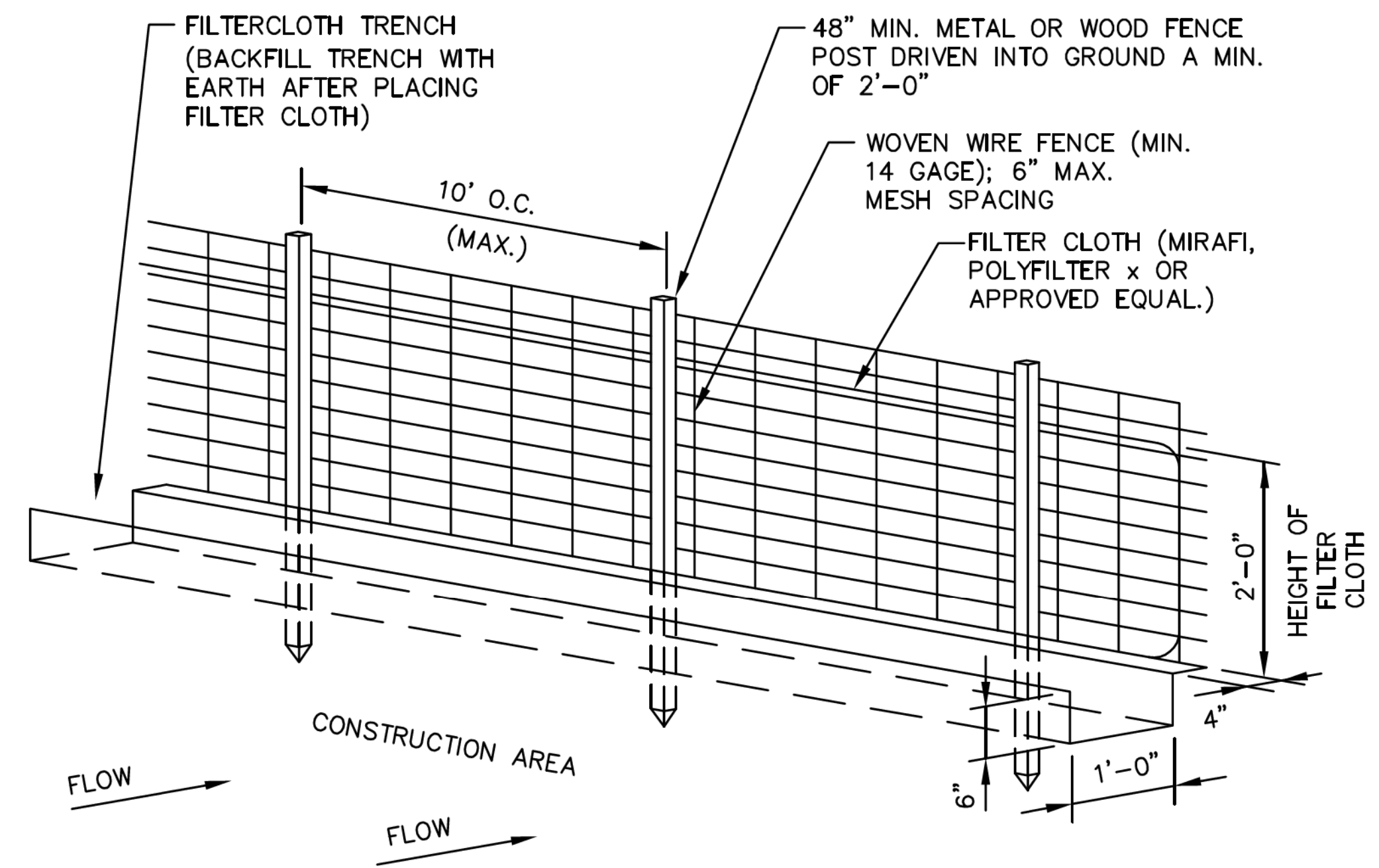
DRAIN INLET



STORM DRAIN INLET PROTECTION DETAIL

DATE: 12/14/06	APPR. BY: BCM	REVISION	DATE	BY
SCALE: N.T.S.	DR. NO.: 02295			
DR. BY:	FILE: INLETPROT			

CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS



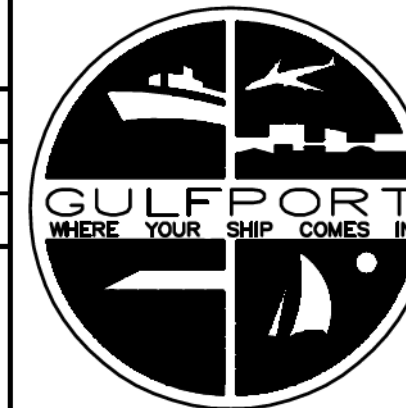
CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS BY USE OF WIRE TIES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE BY USE OF WIRE TIES SPACED EVERY 24" X 24".
3. SILT FENCES TO BE INSTALLED IN LOCATIONS AS SHOWN ON THIS EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING OF CONSTRUCTION TO CONTROL SEDIMENT.
4. SILT FENCES TO BE MAINTAINED AND CLEANED AS NECESSARY TO MAINTAIN IN FUNCTIONAL CONDITION.
5. SILT FENCES TO BE REMOVED AND THE AREA TO BE RESTORED TO ITS NATURAL CONDITION WHEN PERMANENT EROSION AND SEDIMENT CONTROL PROCEDURES ARE EFFECTIVE.

SILT FENCE DETAIL

DATE: 8/31/92	APPR. BY: BCM	REVISION	DATE	BY
SCALE: N.T.S.	DR. NO.: 02295-A			
DR. BY:	FILE: SILTFNC			

CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS				DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.:	FILENAME:
				00.14470.00	DETAILS.DGN
				SCALE:	NTS
				SURVEYED BY:	
				DSGN:	JLD DATE: _____
				DRWN:	JTD DATE: _____
				CHKD:	JLD DATE: _____
				QA/QC:	DLS DATE: _____

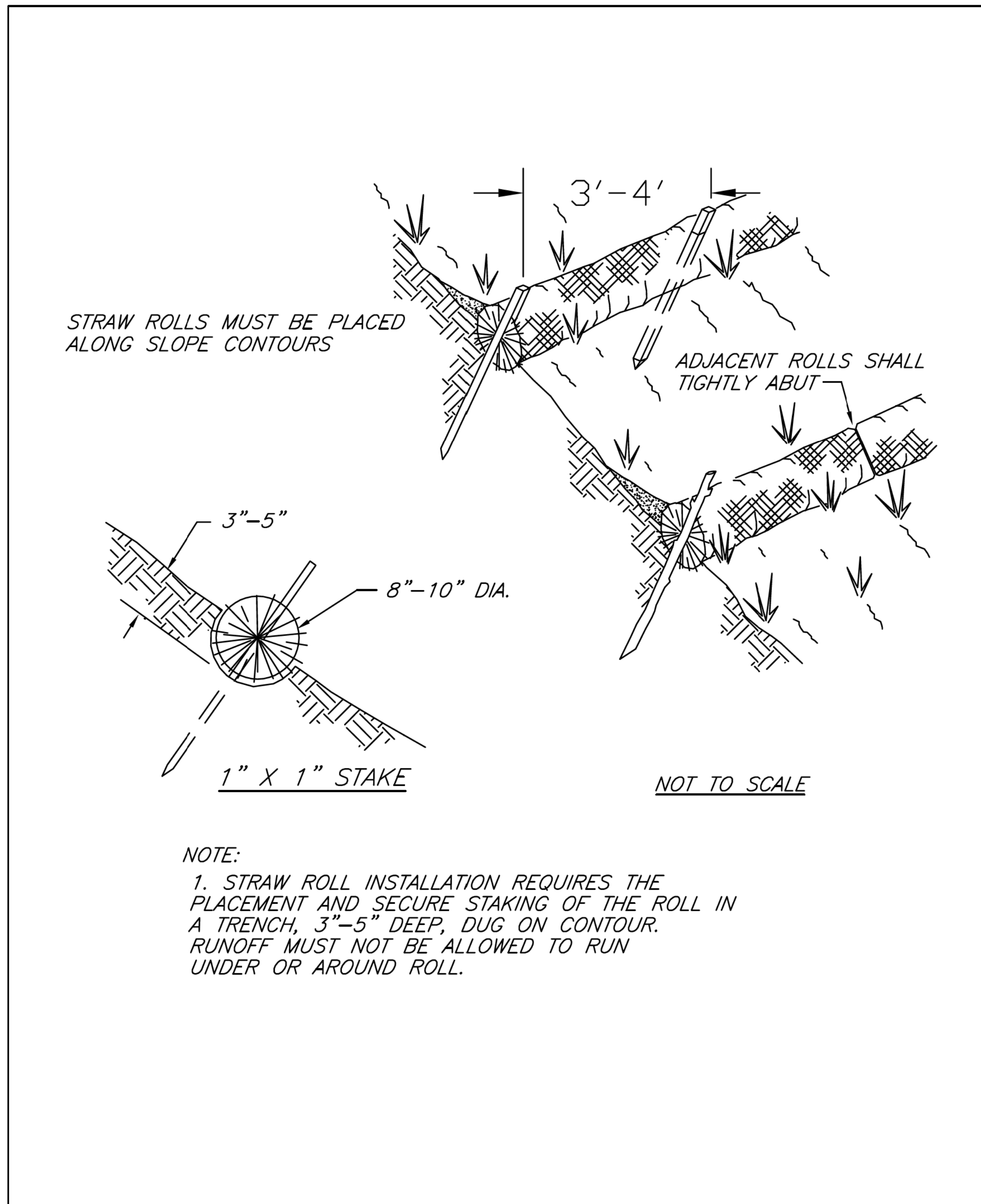
DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



EROSION CONTROL

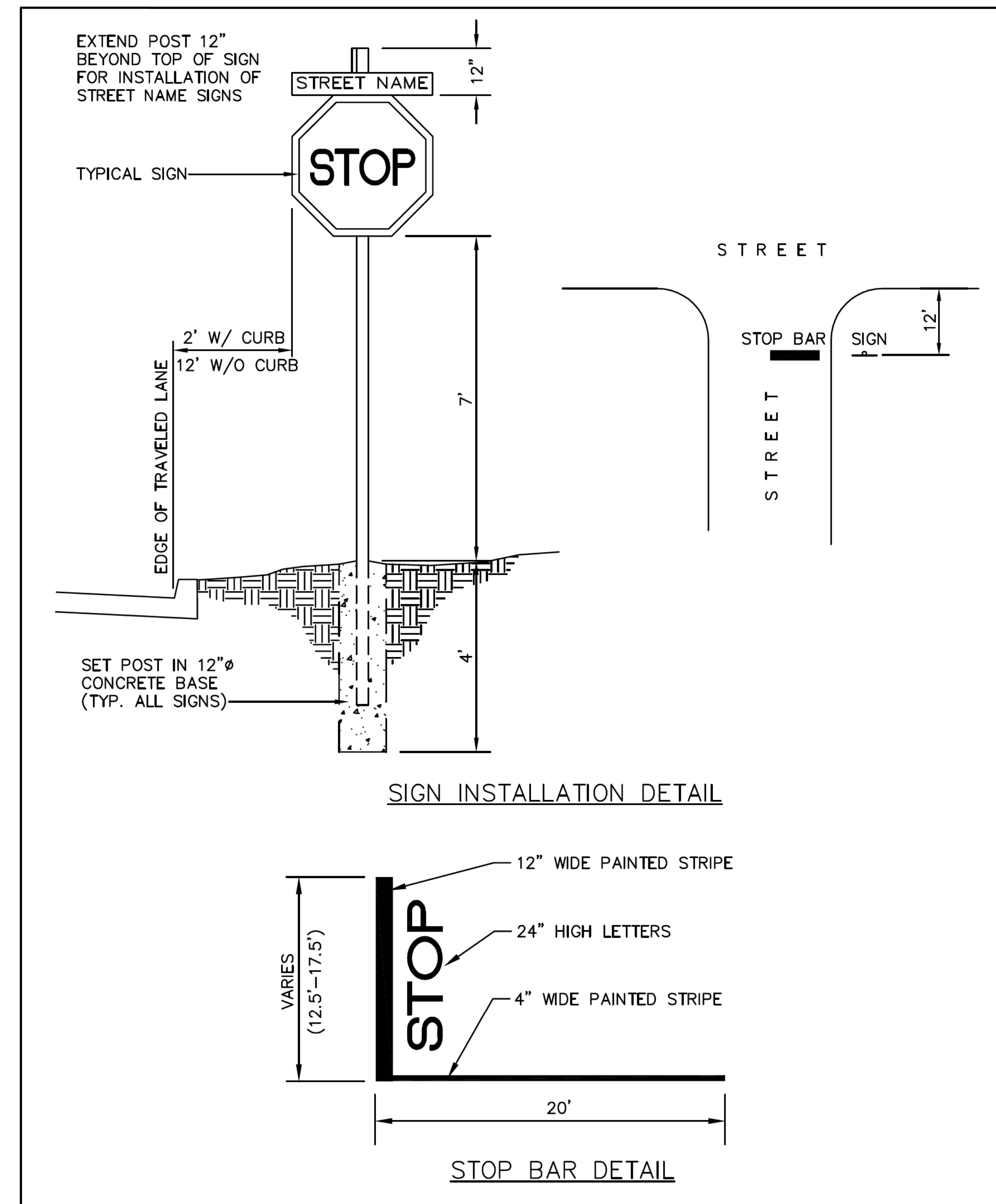
WORKING NUMBER:	DRAWING NUMBER:
DET-9	32



STRAW ROLL WATTLE DETAIL				
DATE: 12/14/06	APPR. BY: BCM	REVISION	DATE	BY
SCALE: N.T.S.	DR. NO.: 02295-B			
DR. BY:	FILE: STRAWWATTLE			



CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS



STOP SIGN & BAR DETAIL				
DATE:	APPR. BY: BCM	REVISION	DATE	BY
SCALE: N.T.S.	DR. NO.: 02585			
DR. BY:	FILE: STOPSIGN			



CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS

NOTICE TO DRAWING HOLDER
NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY: _____
				DSGN: JLD DATE: _____
				DRWN: JTD DATE: _____
				CHKD: JLD DATE: _____
				QA/QC: DLS DATE: _____

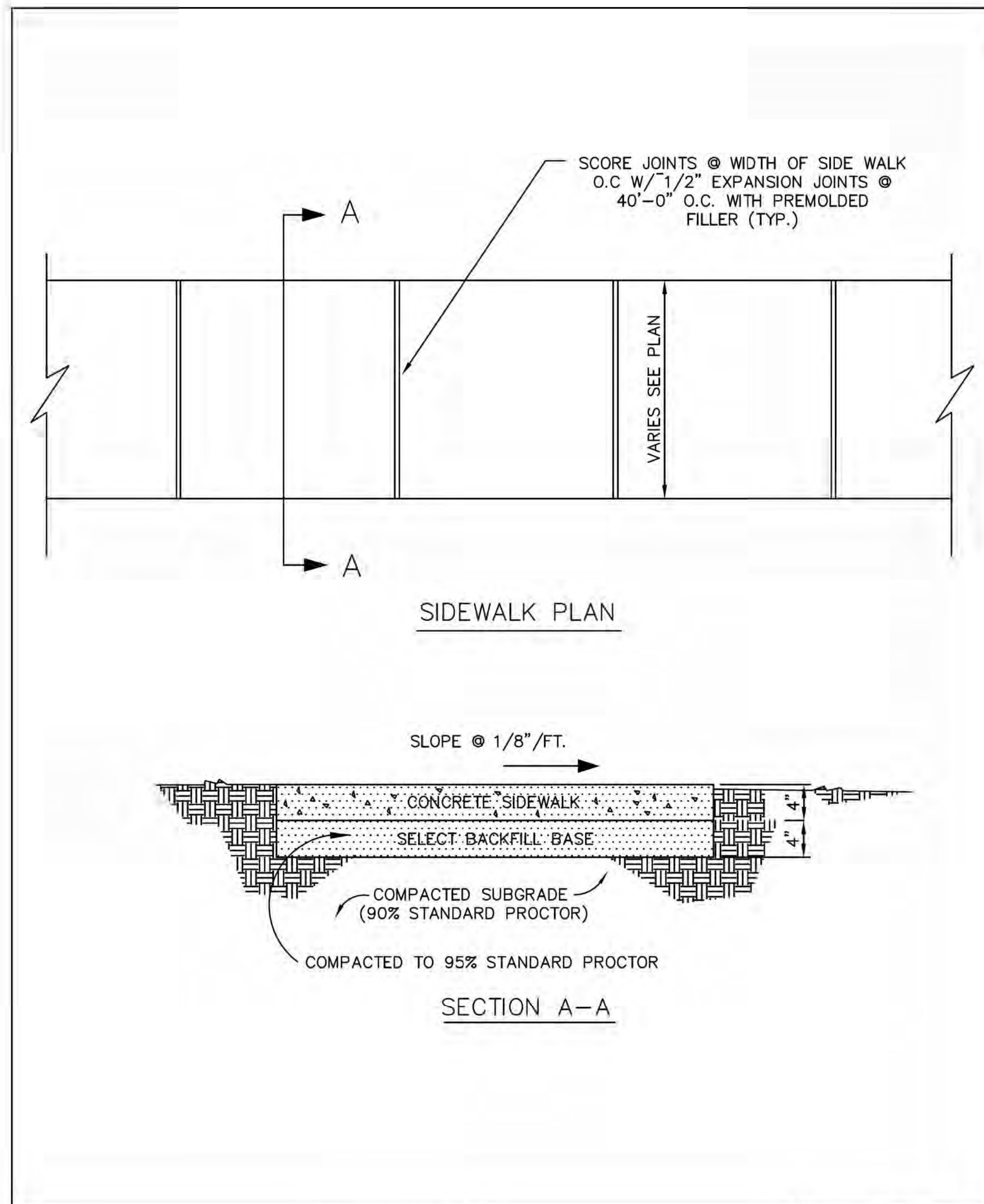
**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI




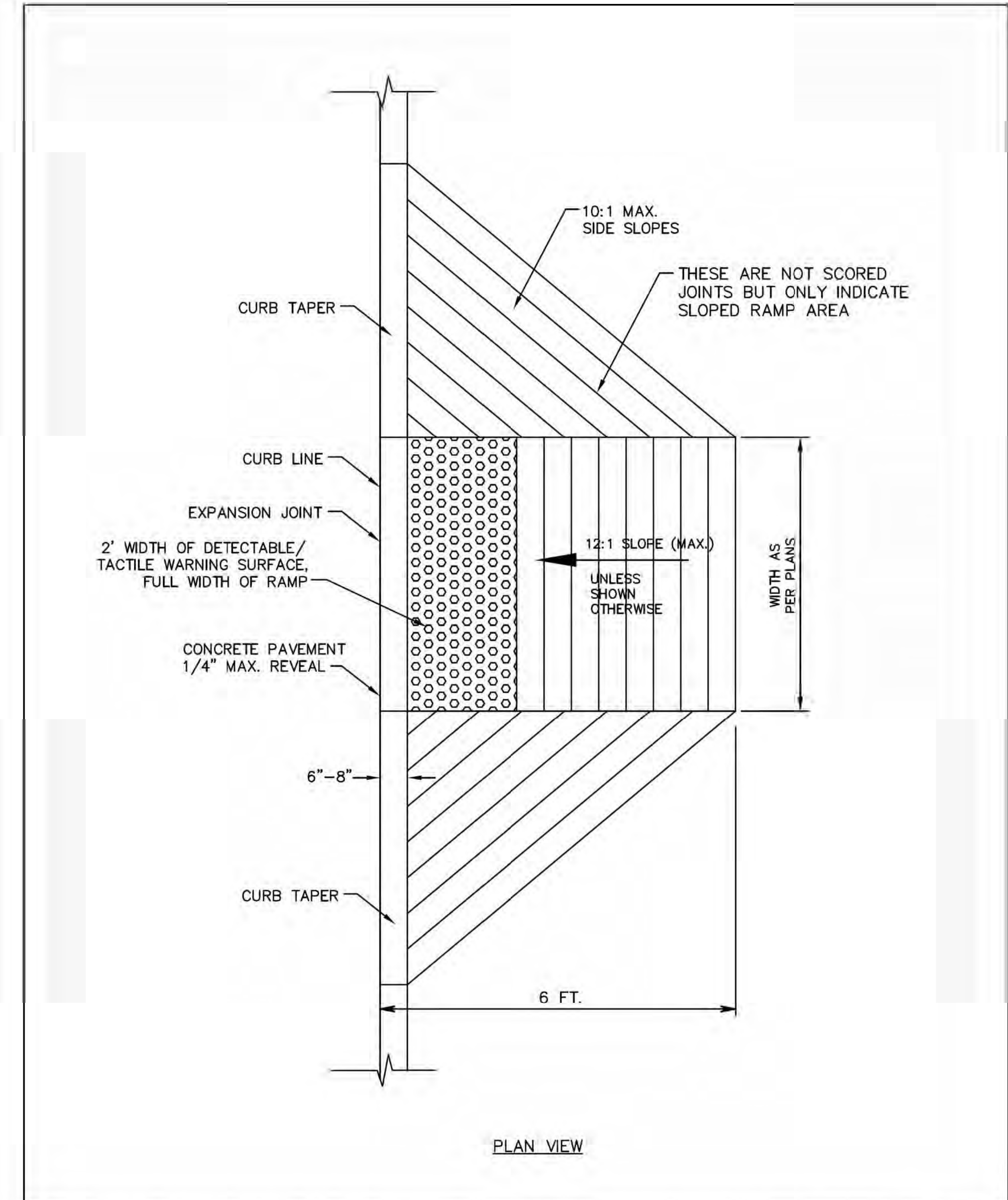
**EROSION CONTROL
STOP SIGN & BAR**

WORKING NUMBER: DET-10
DRAWING NUMBER: 33




SIDEWALK DETAIL				
DATE:	APPR. BY:	REVISION	DATE	BY
2/25/98	BCM			
SCALE: N.T.S.	DR. NO.: 02522			
DR. BY:	FILE: SIDEWALK			

CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS

HANDICAP RAMP w/ DETECTABLE/TACTILE WARNING SURFACE				
DATE:	APPR. BY:	REVISION	DATE	BY
1/12/07	BCM			
SCALE: N.T.S.	DR. NO.: 02522			
DR. BY: KED	FILE: HCRAMPDOME			

CITY OF GULFPORT
STANDARD CONSTRUCTION DETAILS



NOTICE TO DRAWING HOLDER

NEEL-SCHAFFER, INC., HEREINAFTER REFERRED TO AS THE ENGINEER, HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 00.14470.00
				FILENAME: DETAILS.DGN
				SCALE: NTS
				SURVEYED BY:
				DSGN: JLD DATE:
				DRWN: JTD DATE:
				CHKD: JLD DATE:
				QA/QC: DLS DATE:

**DRAINAGE IMPROVEMENTS ON
18TH STREET AT US49
TO BRICKYARD BAYOU**

CITY OF GULFPORT
GULFPORT, MISSISSIPPI



NEEL-SCHAFFER
Solutions you can build upon

SIDEWALK DETAILS	
WORKING NUMBER:	DRAWING NUMBER:
DET-11	34