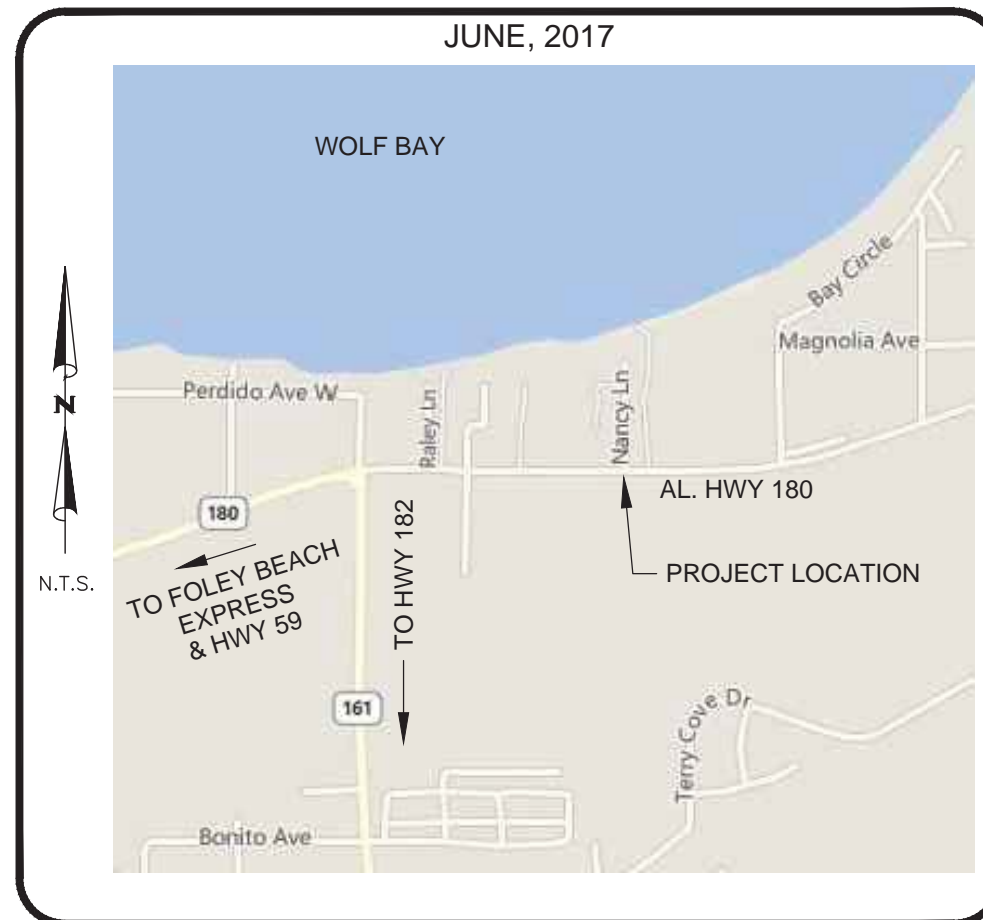


ART CENTER SITE IMPROVEMENTS

CITY OF ORANGE BEACH

CIVIL CONSTRUCTION DRAWINGS

JUNE, 2017



VICINITY MAP

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UTILITY PROVIDERS

SANITARY SEWER	CITY OF ORANGE BEACH
WATER	ORANGE BEACH WATER AUTHORITY
POWER	BALDWIN EMC
TELEPHONE	CENTURYLINK

PREPARED BY:



11143 Old Highway 31 Spanish Fort, AL 36527
818 N. McKenzie Street Foley, AL 36535

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CITY OF ORANGE BEACH - FOR UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE DONE BY HIS EQUIPMENT TO EXISTING SANITARY SEWER LATERALS, UTILITIES, CROSS-DRAIN PIPES, BOX CULVERTS AND HEADWALLS ALL DISTRIBUTED OR BROKEN PIPES SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOWS THROUGH ANY EXISTING CULVERT, PIPE, CHANNELS AND STRUCTURES AND DIVERSION OF FLOWS IN THE CONSTRUCTION AREA AS NECESSARY DURING CONSTRUCTION WITH NO DIRECT PAYMENT. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT PAY ITEMS.
3. ALL CONSTRUCTION ACTIVITIES SHALL INCORPORATE BEST MANAGEMENT PRACTICES AS REQUIRED BY ADEM AND EPA AND THE CONTRACT SPECIFICATIONS TO CONTROL EROSION, SEDIMENTATION AND THE POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION CONSTRUCTION PRACTICES INCLUDE:
4. CONSTRUCT TEMPORARY SEDIMENTATION BASINS OR EARTHEN BERMS AT DOWN-GRADIENT ENDS OF NEWLY GRADED AREAS TO PROVIDE FOR SEDIMENT AND TURBIDITY REMOVAL
5. LIMIT SITE CLEARING TO THOSE AREAS REQUIRED FOR A PARTICULAR PHASE OF CONSTRUCTION EXISTING TREES AND VEGETATION TO REMAIN WHEREVER POSSIBLE.
6. TURBIDITY BARRIERS, HAY BALES AND OTHER EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE POTENTIAL FOR EROSION IS ELIMINATED.
7. DO NOT EMPLOY SILT FENCES IN A MANNER TO CAUSE THEM TO ACT AS A DAM ACROSS PERMANENTLY FLOWING WATERCOURSES. USE SILT FENCES AT UPLAND LOCATIONS AND TURBIDITY BARRIERS IN PERMANENT WATER BODIES, REGARDLESS OF WATER DEPTH.
8. TURBIDITY BARRIERS FOR STREAMS AND CREEKS MAY BE EITHER FLOATING OR STAKED TYPE OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS, AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. INSTALL POSTS IN STAKED TURBIDITY BARRIERS IN THE VERTICAL POSITION UNLESS OTHERWISE NOTED.
9. DISTURBED AREAS WITHIN PERMANENT AND TEMPORARY EASEMENTS AND RIGHTS-OF-WAYS SHALL BE RESTORED TO PRE-EXISTING CONDITIONS OR BETTER BY INSTALLING TOPSOIL AND SOLID SOD IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE TYPE OF SOLID SOD SHALL MATCH EXISTING SOD AS DETERMINED BY THE ENGINEER.
10. THE DEWATERING LIQUID SHALL BE TESTED FOR A TCLP AND FECAL AND RESULTS PROVIDED TO THE CITY FOR DISCHARGING INTO THE CITY'S STORM SEWER SYSTEM. ADDITIONALLY, THE CONTRACTOR SHALL NOT DISCHARGE TURBID DEWATERING LIQUID INTO THE CITY'S STORM WATER SYSTEM.

1. EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE IF THE LOCATIONS SHOWN ARE CORRECT AND TO DETERMINE IF THERE ARE ADDITIONAL LINES THAT ARE NOT SHOWN ON THE PLANS. ALSO, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL UTILITY LINES DURING CONSTRUCTION WITH NO ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITY OWNER FOR ANY LINES THAT MAY CONFLICT WITH THE CONSTRUCTION AND THEY WILL MAKE THE ADJUSTMENTS NECESSARY (IN THE OPINION OF THE ENGINEER). IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL UTILITY ADJUSTMENTS, AND THERE WILL BE NO ADDITIONAL COMPENSATION FOR THIS COORDINATION, OR ANY DELAYS RESULTING FROM UTILITY ADJUSTMENTS. FOR UTILITY LOCATION SERVICE, THE CONTRACTOR SHALL CALL 1-800-292-8525 AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY OWNER FOR THE COORDINATION OF ANY UTILITIES REQUIRING RELOCATION. THE ENGINEER RESERVES THE RIGHT TO RELOCATE OR ADJUST REQUIRED SANITARY SEWER LINE LOCATIONS AND WATER MAINS TO AVOID EXISTING UTILITIES LOCATED BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF ALABAMA TO LOCATE PROPERTY CORNERS AND LAYOUT THE EASEMENTS AND DRAINAGE ALIGNMENTS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS TO THE EASEMENT DOCUMENTS OBTAINED BY THE OWNER, INCLUDING ALL ADDENDUMS, PROPERTY SPECIFIC ITEMS ARE LISTED ON THE PLANS FOR REFERENCE. HOWEVER IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL EASEMENT AGREEMENTS.
3. ALL PROPERTY AND RIGHT-OF-WAY LINE LOCATIONS SHOWN ARE APPROXIMATE. PROJECT RIGHT-OF-WAY LINES SHALL BE SURVEYED AS NOTED ABOVE BY THE CONTRACTOR USING REFERENCES AS NECESSARY. PROJECT EASEMENTS SHALL BE LOCATED BY THE CONTRACTOR USING REFERENCES AS NOTED ON THE CONSTRUCTION PLANS.
4. ALL EXISTING BUILDINGS LOCATED WITHIN THE PROJECT LIMITS, EXCEPT THOSE NOTED ON THE PLANS TO BE REMOVED, SHALL BE LEFT IN PLACE. ANY DAMAGE TO THESE BUILDINGS BY THE CONTRACTOR'S OPERATIONS SHALL BE REMEDIED AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK TO A CONDITION EQUAL TO OR BETTER THAN EXISTED BEFORE COMMENCING CONSTRUCTION WORK, UNLESS SPECIFICALLY EXEMPTED BY THE DRAWINGS. RESTORATION WORK INCLUDES, BUT IS NOT LIMITED TO PAVEMENT, BASE, SUB GRADE, CONCRETE CURBS, THERMOPLASTIC TRAFFIC MARKINGS, SIDEWALKS, STORM WATER PIPE, ETC. ALL RESTORATION WORK SHALL BE PER ALDOT STANDARDS AND SPECIFICATIONS AND ALDOT PERMIT REQUIREMENTS IF THERE IS A CONFLICT WITH ALDOT REQUIREMENTS AND THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. IF ADDITIONAL TOPOGRAPHY OR ANY OTHER INFORMATION IS NECESSARY FOR THE CONTRACTOR TO RECONSTRUCT ALL FACILITIES TO PRE CONSTRUCTION GRADES AND DIMENSIONS, THE ACQUISITION OF SUCH ADDITIONAL INFORMATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AT HIS EXPENSE. THE CONTRACTOR SHALL RECONSTRUCT ALL FACILITIES TO PRE-CONSTRUCTION GRADES AND DIMENSIONS, UNLESS OTHERWISE NOTED. WATER, FERTILIZE AND SUPPLY ALL VEGETATION REMOVED AND REPLACED AT NOT EXPENSE TO THE OWNER, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. ALL TREES, SHRUBS, ETC., ALONG THE LINES OF CONSTRUCTION SHALL BE PROTECTED WHERE POSSIBLE UNLESS NOTED OTHERWISE ON THE DRAWINGS. NO TREES LARGER THAN THREE INCHES (3") IN DIAMETER SHALL BE DESTROYED WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
7. ALL EXCESS MATERIAL FROM EXCAVATIONS AND BORING (INCLUDING REMOVAL OF EXISTING PAVEMENT, CURB AND GUTTER, AND SIDEWALKS) BELONG TO THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN AN ACCEPTABLE MANNER. COST FOR SUCH REMOVAL AND DISPOSAL IS A SUBSIDIARY OBLIGATION OF THE VARIOUS PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING PIPE FROM FLOATING. IF PIPE FLOATS DURING CONSTRUCTION, THE CONTRACTOR SHALL RELAY PIPE TO GRADE AT HIS EXPENSE
9. CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTY AT ALL TIMES. CONSTRUCTION ALONG THE ROUTE SHOULD BE DONE IN STAGES TO MINIMIZE INCONVENIENCE TO LOCAL TRAFFIC. ALL FLAG MEN AND TRAFFIC CONTROL DEVICES NECESSARY SHALL BE FURNISHED BY THE CONTRACTOR. DETOUR PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER AND /OR ALDOT FOR APPROVAL TRAFFIC REGULATIONS ON THE PROJECT SHALL BE IN ACCORDANCE WITH ALDOT.
10. THE CONTRACTOR SHALL AT ALL TIMES, GAIN PERMISSION FROM THE ENGINEER FOR ANY PROPOSED CONSTRUCTION THAT WILL AFFECT TRAFFIC ON ANY STREET AFTER GAINING PERMISSION FROM THE ENGINEER. THE CONTRACTOR SHALL REQUEST IN WRITING TO THE ENGINEER, AT LEAST THREE (3) DAYS PRIOR TO THE START OF CONSTRUCTION, FOR PERMISSION TO PROCEED WITH THE CONSTRUCTION. THE CONTRACTOR SHALL NOT START SAID CONSTRUCTION UNTIL PERMISSION IS RECEIVED AND ALL WARNING SIGNS, BARRICADES AND OTHER REQUIRED CONVENIENCES AND SAFETY DEVICES REQUIRED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART VI, LATEST EDITION HAVE BEEN INSTALLED AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL AT ALL TIMES, MAINTAIN AT LEAST ONE LANE OF TRAFFIC ON THE STREET WHERE WATER MAINS AND SEWER LINES ARE BEING LAID. THE CONTRACTOR SHALL PROVIDE THE NECESSARY "EXPERIENCED FLAG MAN" TO DIRECT TRAFFIC.
11. AT NO TIME WILL A VALVE OF THE EXISTING WATER SYSTEM, BE OPERATED WITHOUT THE PRESENCE AND AUTHORIZATION OF AN AUTHORIZED EMPLOYEE OF THE CITY OF ORANGE BEACH OR ORANGE BEACH WATER AUTHORITY.
12. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY CONTROLS AND/OR STRUCTURES REQUIRED TO MAINTAIN SUITABLE AND SAFE WORKING CONDITIONS AT ALL TIMES. SUCH ITEMS SHALL BE REMOVED ONCE THAT PORTION OF WORK HAS BEEN COMPLETED.
13. SHOULD THE CONTRACTOR ELECT TO OBTAIN AREAS FOR THE PURPOSE OF STORING MATERIALS AND EQUIPMENT OR FOR CONDUCTING HIS WORK OPERATIONS, HE SHALL FURNISH THE OWNER AND ENGINEER A COPY OF THE AGREEMENT BETWEEN HIM AND THE OWNER OF THE PROPERTY PRIOR TO USING THE AREA (NO DIRECT PAYMENT). ANY CURB AND GUTTER, SIDEWALK, DRIVEWAY, ETC. DAMAGED BY THE CONTRACTOR WHEN HAULING MATERIALS OR MOVING EQUIPMENT IN OR OUT FROM THIS STORAGE AREA SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
14. THE OWNER RESERVES THE RIGHT TO DELETE, REDUCE AND/OR INCREASE ANY BID ITEM OR ITEM OF WORK. NO ADJUSTMENT WILL BE MADE TO THE OTHER BID ITEM PRICES DUE TO THESE REVISIONS.
15. A MINIMUM HORIZONTAL DISTANCE OF FIVE (5) FEET SHALL BE MAINTAINED BETWEEN ALL WATER MAINS AND SANITARY SEWER LINES, UNLESS OTHERWISE UNAVAILABLE, IN LOCATIONS WHERE WATER MAINS MUST CROSS SANITARY SEWER TRUNK LINES, THE SEWER MAIN SHALL BE LAID AT SUCH ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS 18 INCHES ABOVE THE TOP OF THE SANITARY SEWERS. THIS VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATER MAIN LOCATED WITHIN FIVE FEET HORIZONTALLY OF THE SEWER LINE.
16. SPECIAL EMPHASIS ON EXCAVATION SAFETY AND TRENCH CONSTRUCTION:
 - A. OSHA'S EXCAVATION SAFETY STANDARDS 29, CFR PART 1926.650-652 SUBPART P. IS CONSIDERED AS COMPLIMENTARY TO THESE CONTRACT DOCUMENTS. IF THERE IS ANY DUPLICATION, REDUNDANCY OR CONFLICT BETWEEN THE STIPULATIONS OF THESE CONTRACT DOCUMENTS AND THOSE STANDARDS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.
 - B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT EXCAVATIONS DO NOT ENDANGER WORKMEN, EXISTING STRUCTURES, UTILITIES, OR OTHER FACILITIES. IF SUCH CONDITIONS OCCUR WHICH MAY ENDANGER WORKMEN, EXISTING STRUCTURES, UTILITIES, OR OTHER FACILITIES, IMMEDIATELY INSTALL AND MAINTAIN ADEQUATE SHEETING AND BRACING PER OSHA SPECIFICATIONS CEASE ALL WORK UNTIL THE SHEETING AND BRACING HAS BEEN PROPERLY AND COMPLETELY INSTALLED. INSTALL THE SHEETING AND BRACING IN A MANNER THAT WILL ALLOW REMOVAL WITHOUT INJURING OR ENDANGERING AND COMPLETELY FILL ALL VOIDS CAUSED BY THE WITHDRAWAL OF SHEETING WITH SAND AND COMPACT TO A DEGREE EQUAL TO THE SURROUNDING SOIL. REMOVE THE SHEETING AS THE WORK PROGRESSES OR, AT THE DISCRETION OF THE ENGINEER, CUT THE SHEETING OFF BELOW FINISHED GRADE AND LEAVE IN PLACE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND TEMPORARILY RELOCATING ALL INFORMATION AND TRAFFIC SIGNS DURING CONSTRUCTION. SIGN SHOULD BE VISIBLE TO MOTORIZED VEHICLES; REPOSITION SIGNS IN A PRE-CONSTRUCTION LOCATION IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED IN THESE AREAS. EXISTING STREET & ROAD NAMES SIGNS IN THE PROJECT AREAS SHALL BE KEPT VISIBLE AT ALL TIMES FOR THE FACILITATION OF ACCESS BY EMERGENCY VEHICLE TRAFFIC.
18. FOLLOWING FINAL ACCEPTANCE OF THIS PROJECT, THE CONTRACTOR SHALL FINALIZE AND SUBMIT TO THE ENGINEER A COMPLETE SET OF RECORD DRAWINGS SHOWING ACTUAL QUANTITIES, LOCATION AND VALVE REFERENCES. THE ENGINEER WILL FURNISH THE CONTRACTOR AN "ISSUED FOR CONSTRUCTION" SET OF DRAWINGS TO BE USED FOR THIS PURPOSE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A RECORD DRAWING SET OF PLANS AS THE PROJECT PROGRESSES, PAY ESTIMATES SHALL NOT BE RECOMMENDED FOR PAYMENT UNTIL THE CONTRACTOR HAS DEMONSTRATED TO THE OWNER'S REPRESENTATIVE THAT THE RECORD DRAWINGS ARE BEING MAINTAINED.
19. THE CONTRACTOR SHALL BACKFILL ALL TRENCHES AT THE END OF EACH DAYS WORK NO TRENCH SHALL BE LEFT OPEN OVERNIGHT. THE ENDS OF ALL PIPE SHALL BE PLUGGED AT THE CLOSE OF EACH DAY'S WORK.

EROSION & SEDIMENTATION NOTES

1. ALL DRAINAGE SWALES MUST BE GRASSED AND RIP-RAP MUST BE PLACED AS SHOWN TO CONTROL EROSION.
2. SILT FENCE MUST MEET THE REQUIREMENTS OF LOCAL JURISDICTIONAL AGENCY, SAID REQUIREMENTS AS SHOWN BY THESE PLANS.
3. DISTURBED AREAS SHALL BE VEGETATED AFTER CONSTRUCTION.
4. ADDITIONAL EROSION CONTROL MEASURES OR SILT BARRIERS TO BE PLACED AS SHOWN AND/OR DIRECTED BY THE PROJECT ENGINEER AND/OR LOCAL JURISDICTIONAL INSPECTOR.
5. WHEN ANY CONSTRUCTION BORDERS A DRAINAGE COURSE:
 - A. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY BUILDING OR OTHER EXCAVATION SPOIL DIRT, CONSTRUCTION TRASH OR DEBRIS, ETC., FROM THE DRAINAGE AREA SHOWN HEREON IN AN EXPEDITIOUS MANNER AS CONSTRUCTION PROGRESSES.
 - B. THE CONTRACTOR HEREBY AGREES TO STOP ALL WORK AND RESTORE THESE AREAS IMMEDIATELY UPON NOTIFICATION BY THE LOCAL JURISDICTIONAL INSPECTOR AND/OR PROFESSIONAL ENGINEER.
6. FOR ALL CONSTRUCTION ALONG AND/OR ACROSS WATERWAYS, BANK PROTECTION AND STABILIZATION SHALL BE REQUIRED AS PER LOCAL JURISDICTIONAL EROSION LAWS,
7. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION AND SHALL BE MAINTAINED IN PROPER WORKING ORDER UNTIL ALL DISTURBED AREAS ARE STABILIZED. CONSTRUCTION ENTRANCE PADS SHALL BE INSTALLED BY THE CONTRACTOR AT CONSTRUCTION ACCESS POINTS PRIOR TO LAND DISTURBANCE.
8. A COPY OF THE APPROVED LAND DISTURBANCE PLAN SHALL BE PRESENT ON THE SITE WHENEVER LAND DISTURBING ACTIVITY IS IN PROGRESS.
9. CONSTRUCT SILT FENCE ALONG THE DOWNSTREAM SIDE OF ALL PROPOSED FILL CONSTRUCTION.
10. EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
11. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. CONTRACTOR SHALL CLEAN OUT ALL SEDIMENT PONDS WHEN REQUIRED BY THE ENGINEER OR LOCAL JURISDICTIONAL INSPECTOR. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
12. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE UTILIZED FOR EROSION CONTROL IN THE DETENTION POND, SILT SHALL BE REMOVED WHEN A DEPTH OF 18" HAS ACCUMULATED AT THE WEIR.
13. ALL EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION IN ACCORDANCE WITH EASEMENT PLATS PRIOR ACCEPTANCE.
14. SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.
15. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES AROUND THE WORK AND SHALL PROVIDE PROTECTION AGAINST WATER DAMAGE AND SOIL EROSION.
16. TREE PROTECTION AND EROSION CONTROL MEASURES ARE TO BE ACCOMPLISHED PRIOR TO ANY OTHER CONSTRUCTION ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
17. ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL SILT BARRIER AND DETENTION FACILITIES ARE CONSTRUCTED.
18. ALL SEDIMENT CONTROL DEVICES ARE TO BE CONSTRUCTED AND FULLY OPERATIONAL PRIOR TO ANY OTHER CONSTRUCTION OR GRADING.
19. ALL DISTURBED AREAS TO BE GRASSED AS SOON AS POSSIBLE.
20. ALL SLOPES SHALL BE STABILIZED AS SOON AS POSSIBLE.
21. GRASS AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH GRASS IN KIND. IN AREAS OF INDECIPHERABLE GRASSES—USE FESCUE.
22. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM REQUIRED MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL DEVICES TO ENSURE THEIR FUNCTION AT ALL TIMES.
23. LENGTH OF RIP RAP AREA SHALL BE 6(SIX) TIMES THE DIAMETER OF THE STORM DRAIN PIPE. WIDTH OF RIP RAP AREA SHALL BE THREE(3) TIMES THE DIAMETER AT THE MOUTH OF THE PIPE AND TWO(2) TIMES THE DIAMETER AT THE DOWNSTREAM END.

SITE NOTES

1. ALL CONCRETE SHALL BE CLASS A, 3,000 PSI AT 28 DAYS COMPRESSIVE STRENGTH WITH A MAXIMUM SLUMP OF 4" UNLESS NOTED OTHERWISE. ALL EXPOSED CONCRETE TO HAVE A FINE BROOM FINISH.
2. ALL MATERIALS SHALL BE NEW UNLESS USED OR SALVAGED MATERIALS ARE AUTHORIZED BY THE OWNER OR TENANT.
3. ALL DIMENSIONS ARE FACE OF CURB AND FACE OF BUILDING OR AS NOTED.
4. NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART VI, SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION
5. ALL SIDEWALK ENTRANCES AND EXITS SHALL HAVE TRUNCATED DOMES AS SPECIFIED IN SPECIAL DRAWING NO. SW-618, INDEX NO. 734 OF THE ALABAMA DEPARTMENT OF TRANSPORTATION (ALDOT) SPECIAL AND STANDARD HIGHWAY DRAWING MANUAL.
6. THE CONTRACTOR SHALL SIZE, INSTALL, AND MAINTAIN ADEQUATE CONTROLS FOR THE SITE. REFER TO THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL, AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS, LATEST EDITION.
7. THE BENCHMARK WAS REFERENCED TO CONTINUOUS OPERATING REFERENCE STATION RTCM0960.

ONSITE CONTACT: THOMAS E. GRANGER, P.E.
 (251) 544.7900 OFFICE
 (251) 295.6921 CELL

NUMBER:	REVISION:	DATE:



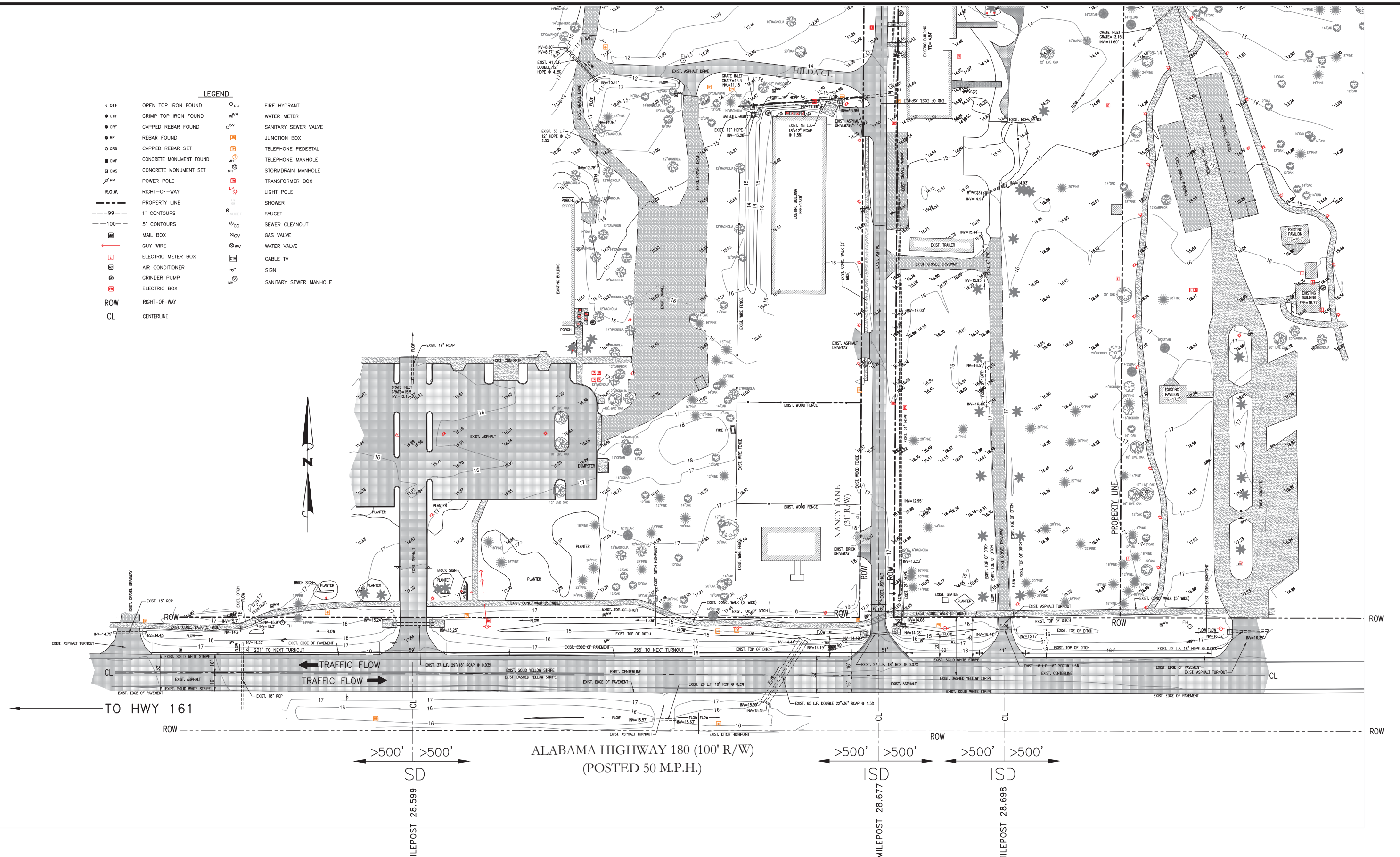
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CONSULTING, LLC
ENGINEERING - SURVEYING - CONSTRUCTION MANAGEMENT

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PROJECT NOTES
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	NTS
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	2 OF 22

- LEGEND**
- OTF OPEN TOP IRON FOUND
 - CTF CRIMP TOP IRON FOUND
 - CRF CAPPED REBAR FOUND
 - RF REBAR FOUND
 - CRS CAPPED REBAR SET
 - CMF CONCRETE MONUMENT FOUND
 - CMS CONCRETE MONUMENT SET
 - PP POWER POLE
 - R.O.W. RIGHT-OF-WAY
 - PROPERTY LINE
 - 99- 1' CONTOURS
 - 100- 5' CONTOURS
 - MB MAIL BOX
 - GW GUY WIRE
 - EMB ELECTRIC METER BOX
 - AC AIR CONDITIONER
 - GRP GRINDER PUMP
 - EB ELECTRIC BOX
 - ROW RIGHT-OF-WAY
 - CL CENTERLINE
 - FH FIRE HYDRANT
 - WM WATER METER
 - SSV SANITARY SEWER VALVE
 - JB JUNCTION BOX
 - TP TELEPHONE PEDESTAL
 - TM TELEPHONE MANHOLE
 - SM STORMDRAIN MANHOLE
 - TB TRANSFORMER BOX
 - LP LIGHT POLE
 - SH SHOWER
 - F FAUCET
 - SC SEWER CLEANOUT
 - GV GAS VALVE
 - WV WATER VALVE
 - CTV CABLE TV
 - S SIGN
 - SSM SANITARY SEWER MANHOLE



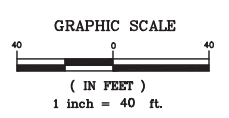
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 ENGINEERING - SURVEYING - CONSTRUCTION MANAGEMENT

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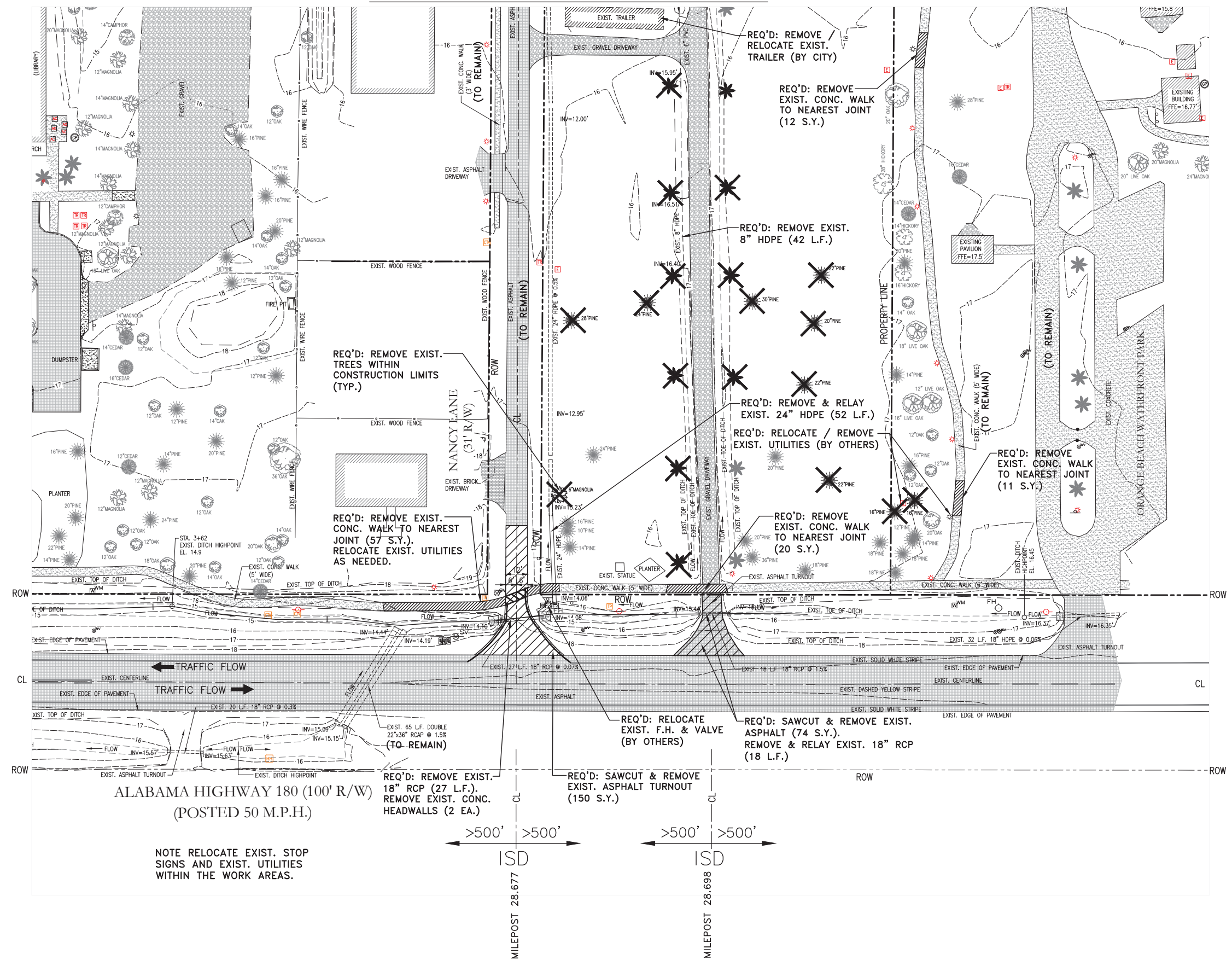
EXIST. CONDITIONS PLAN
 ARTS CENTER SITE IMPROVEMENTS
 CITY OF ORANGE BEACH

SCALE:	1"=40'
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	3 OF 22

SEE SHT. 5 FOR CONTINUATION.

LEGEND

○ OTF	OPEN TOP IRON FOUND	○ FH	FIRE HYDRANT
● CTF	CRIMP TOP IRON FOUND	⊕ WM	WATER METER
● CRF	CAPPED REBAR FOUND	○ SSV	SANITARY SEWER VALVE
● RF	REBAR FOUND	⊕ JB	JUNCTION BOX
○ CBS	CAPPED REBAR SET	⊕ TP	TELEPHONE PEDESTAL
■ CMF	CONCRETE MONUMENT FOUND	⊕ TM	TELEPHONE MANHOLE
■ CMS	CONCRETE MONUMENT SET	⊕ SM	STORMDRAIN MANHOLE
⊕ PP	POWER POLE	⊕ TB	TRANSFORMER BOX
---	RIGHT-OF-WAY	○ LP	LIGHT POLE
---	PROPERTY LINE	○ SC	SEWER CLEANOUT
---	1' CONTOURS	⊕ GV	GAS VALVE
---	5' CONTOURS	⊕ WV	WATER VALVE
⊕ MB	MAIL BOX	⊕ CV	CABLE TV
⊕ GW	GUY WIRE	⊕ S	SIGN
⊕ EM	ELECTRIC METER BOX	⊕ ROW	RIGHT-OF-WAY
⊕ EB	ELECTRIC BOX	⊕ CL	CENTERLINE
⊕ CL	CENTERLINE		



← TO HWY 161

ALABAMA HIGHWAY 180 (100' R/W)
(POSTED 50 M.P.H.)

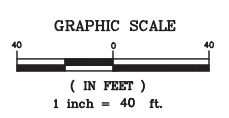
NOTE RELOCATE EXIST. STOP
SIGNS AND EXIST. UTILITIES
WITHIN THE WORK AREAS.



NUMBER:	REVISION:	DATE:
1.	REVISED PER A.L.D.O.T. COMMENTS	6/13/17

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ENGINEERING - SURVEYING - CONSTRUCTION MANAGEMENT

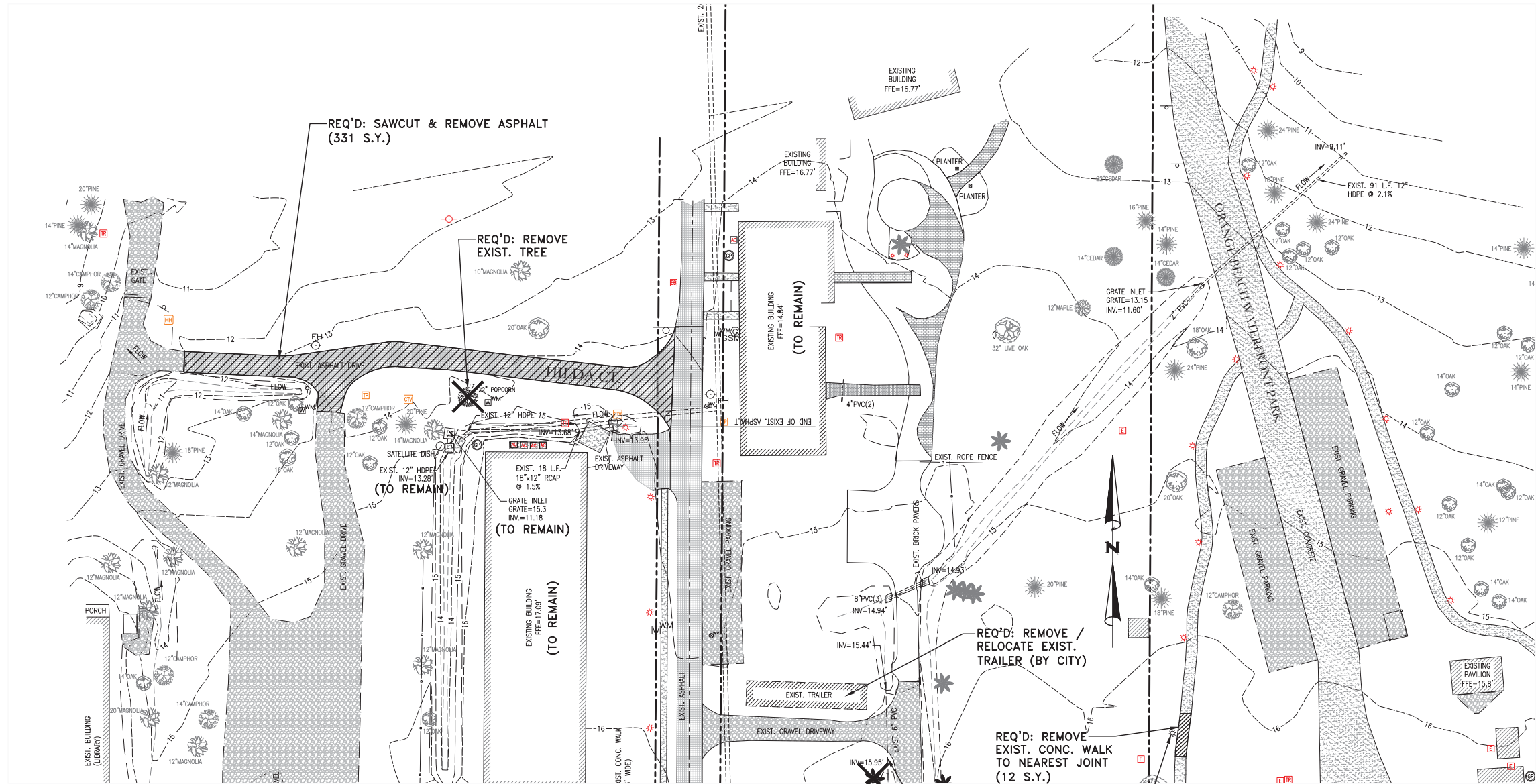
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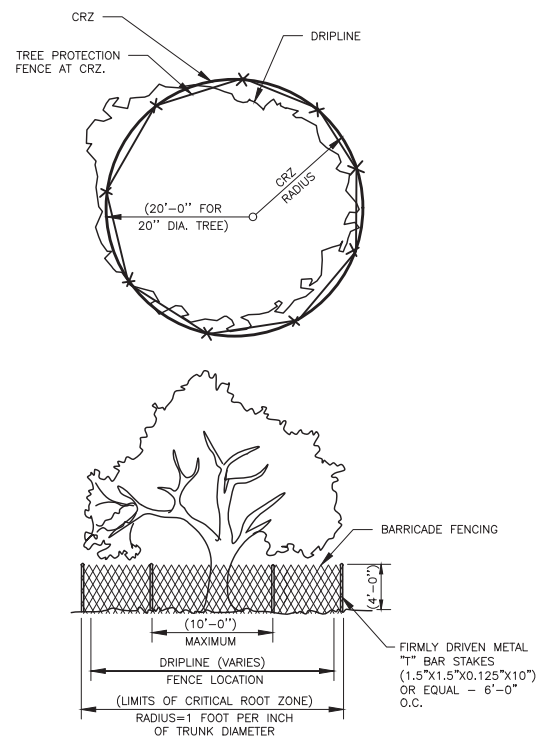
DEMOLITION PLAN: 1 OF 2
ARTS CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	1"=40'
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	4 OF 22

- LEGEND**
- OTF OPEN TOP IRON FOUND
 - CTF CRIMP TOP IRON FOUND
 - CRF CAPPED REBAR FOUND
 - RF REBAR FOUND
 - CRS CAPPED REBAR SET
 - CMF CONCRETE MONUMENT FOUND
 - CMS CONCRETE MONUMENT SET
 - ⚡ PP POWER POLE
 - R.O.W. RIGHT-OF-WAY
 - P.L. PROPERTY LINE
 - 99 1' CONTOURS
 - 100 5' CONTOURS
 - 📧 MAIL BOX
 - 📶 GUY WIRE
 - 🔌 ELECTRIC METER BOX
 - 🔌 ELECTRIC BOX
 - CL CENTERLINE
 - 🔥 FH FIRE HYDRANT
 - 🔍 WM WATER METER
 - ⊙ SSV SANITARY SEWER VALVE
 - ⊠ JUNCTION BOX
 - 📞 TELEPHONE PEDESTAL
 - 📞 TM TELEPHONE MANHOLE
 - 📞 SM STORMDRAIN MANHOLE
 - 📞 TRB TRANSFORMER BOX
 - 📞 LP LIGHT POLE
 - 📞 SC SEWER CLEANOUT
 - 📞 GV GAS VALVE
 - 📞 WV WATER VALVE
 - 📞 CTV CABLE TV
 - 📞 SIGN
 - ROW RIGHT-OF-WAY



SEE SHIT. 4 FOR CONTINUATION.

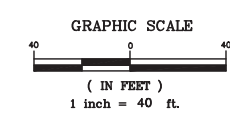


TREE PROTECTION FENCE
N.T.S.

NUMBER:	REVISION:	DATE:
1.	REVISED PER A.L.D.O.T. COMMENTS	6/13/17

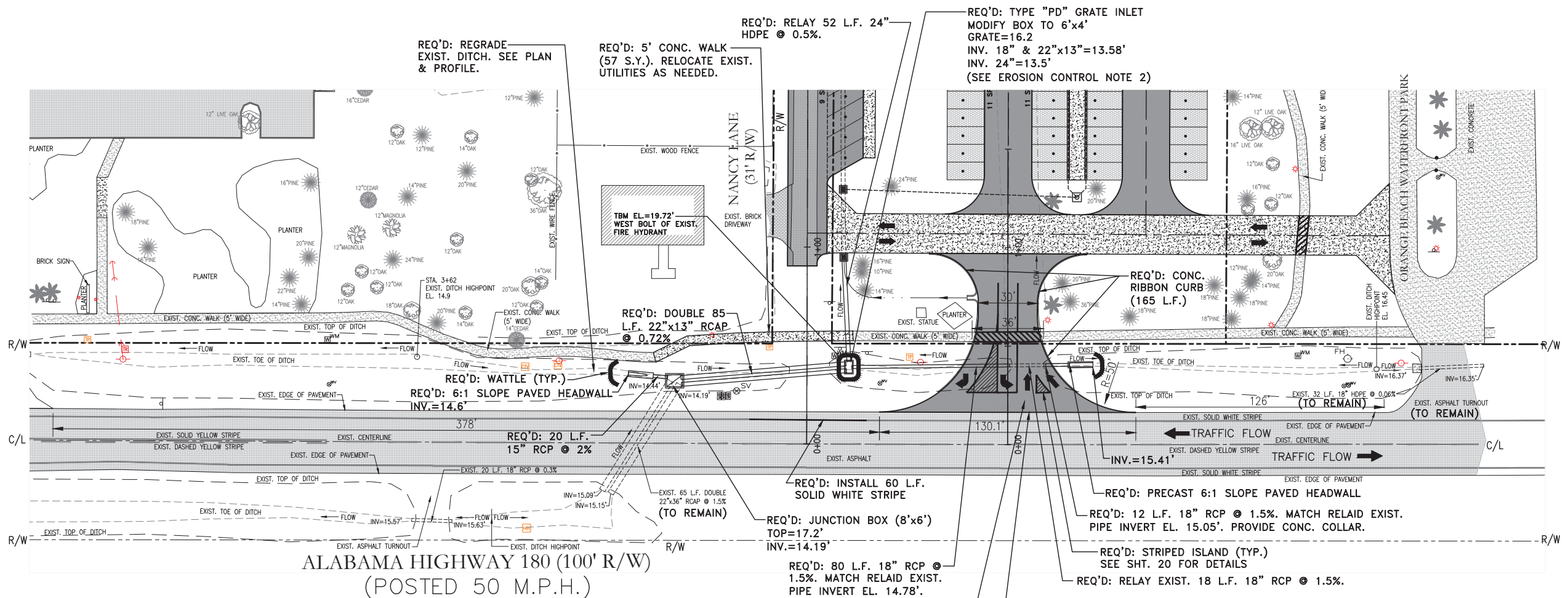
Sawgrass
CONSULTING, LLC
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11143 Old Highway 31 Spanish Fort, AL 36527 Phone: (251) 544-7900
818 N. McKenzie Street Foley, AL 36635 Phone: (251) 970-7900



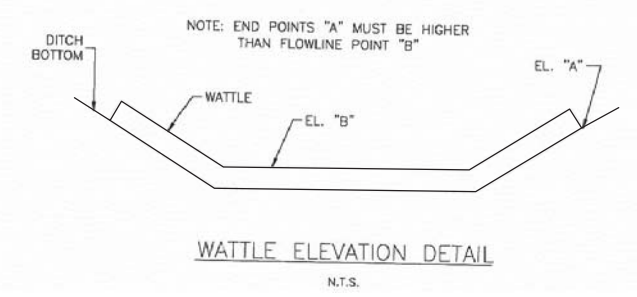
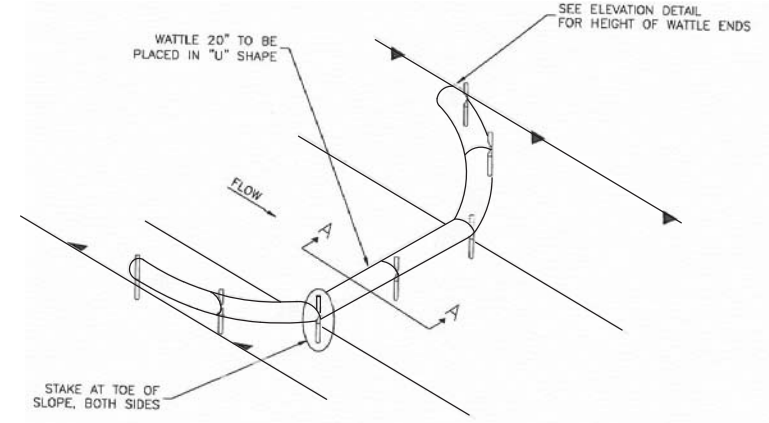
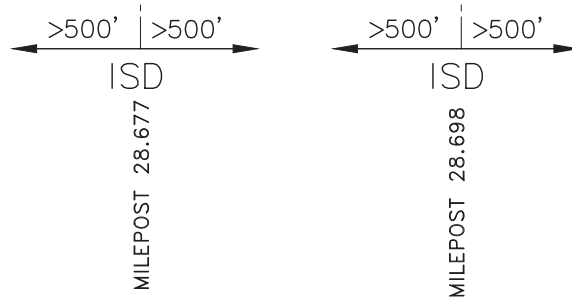
DEMOLITION PLAN: 2 OF 2
ARTS CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	1"=40'
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	5 OF 22



TO HWY 161

ALABAMA HIGHWAY 180 (100' R/W)
(POSTED 50 M.P.H.)



- EROSION CONTROL NOTES:
1. ANY SEDIMENT RUNOFF THAT ENTERS PRIVATE PROPERTY SHALL BE REMOVED AND DAMAGED AREA SHALL BE RESTORED IMMEDIATELY.
 2. WATTLES SHALL BE PLACED AROUND THE TYPE "PD" GRATE INLET IMMEDIATELY AFTER INLET CONSTRUCTION.

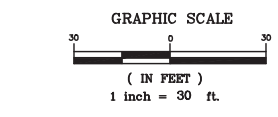
LEGEND

○ OTF	OPEN TOP IRON FOUND	○ FH	FIRE HYDRANT
● CTF	CRIMP TOP IRON FOUND	⊠ WM	WATER METER
● CRF	CAPPED REBAR FOUND	○ SV	SANITARY SEWER VALVE
● RF	REBAR FOUND	⊠ JB	JUNCTION BOX
○ CRS	CAPPED REBAR SET	⊠ TP	TELEPHONE PEDESTAL
■ CMF	CONCRETE MONUMENT FOUND	⊠ TM	TELEPHONE MANHOLE
⊠ CMS	CONCRETE MONUMENT SET	⊠ SM	STORMDRAIN MANHOLE
⊠ PP	POWER POLE	⊠ TB	TRANSFORMER BOX
---	R.O.W.	○ LP	LIGHT POLE
---	PROPERTY LINE	○ SH	SHOWER
---	1' CONTOURS	○ FA	FAUCET
---	5' CONTOURS	○ SC	SEWER CLEANOUT
⊠ MB	MAIL BOX	○ GV	GAS VALVE
○ GW	GUY WIRE	○ WV	WATER VALVE
⊠ EMB	ELECTRIC METER BOX	⊠ CT	CABLE TV
⊠ AC	AIR CONDITIONER	○ S	SIGN
○ GP	GRINDER PUMP	○ SSM	SANITARY SEWER MANHOLE
⊠ EB	ELECTRIC BOX	CL	CENTERLINE
---	ROW		

NUMBER:	REVISION:	DATE:
1.	REVISED PER A.L.D.O.T. COMMENTS	6/13/17

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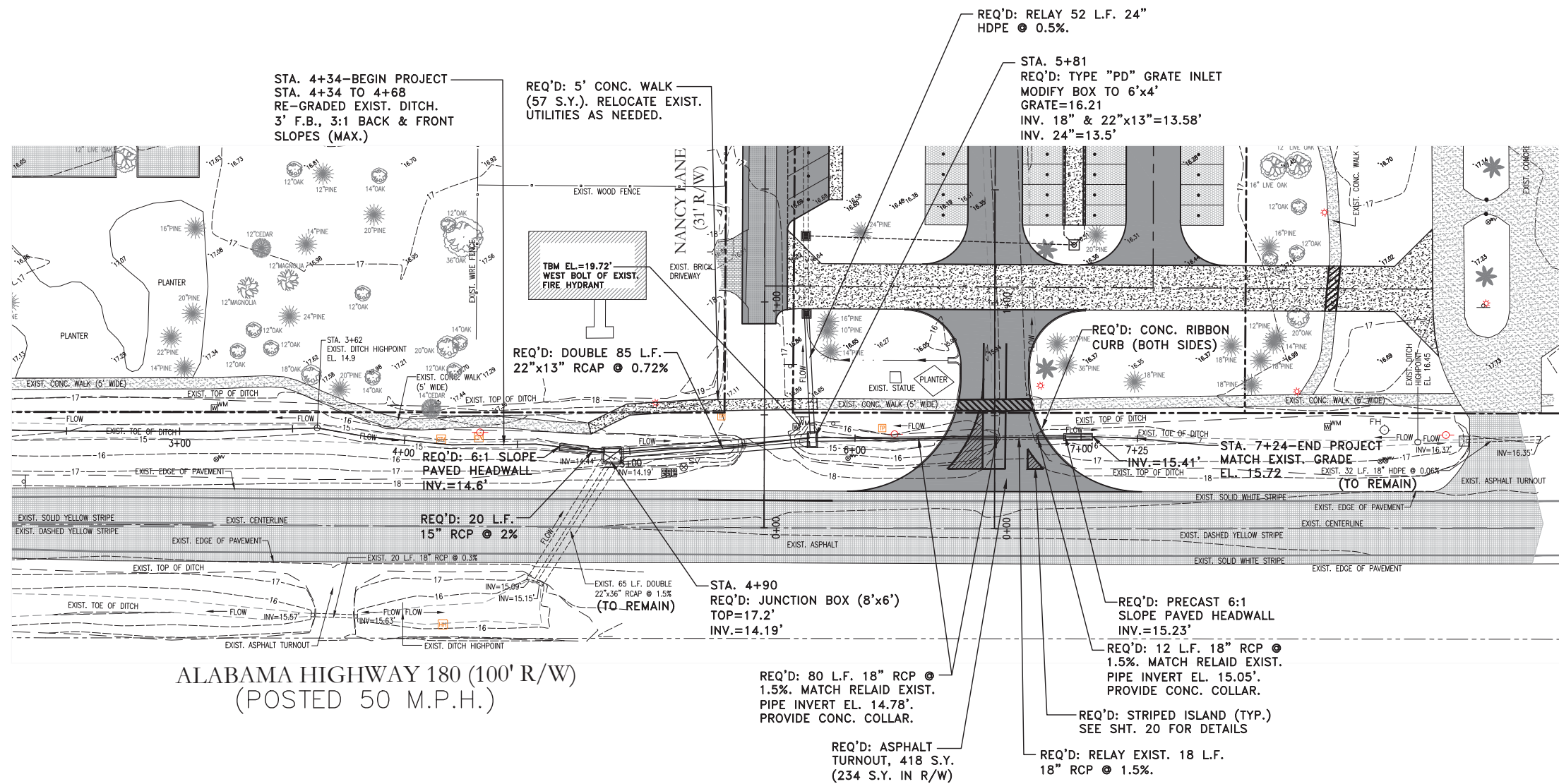


DRIVE TURNOUT PLAN

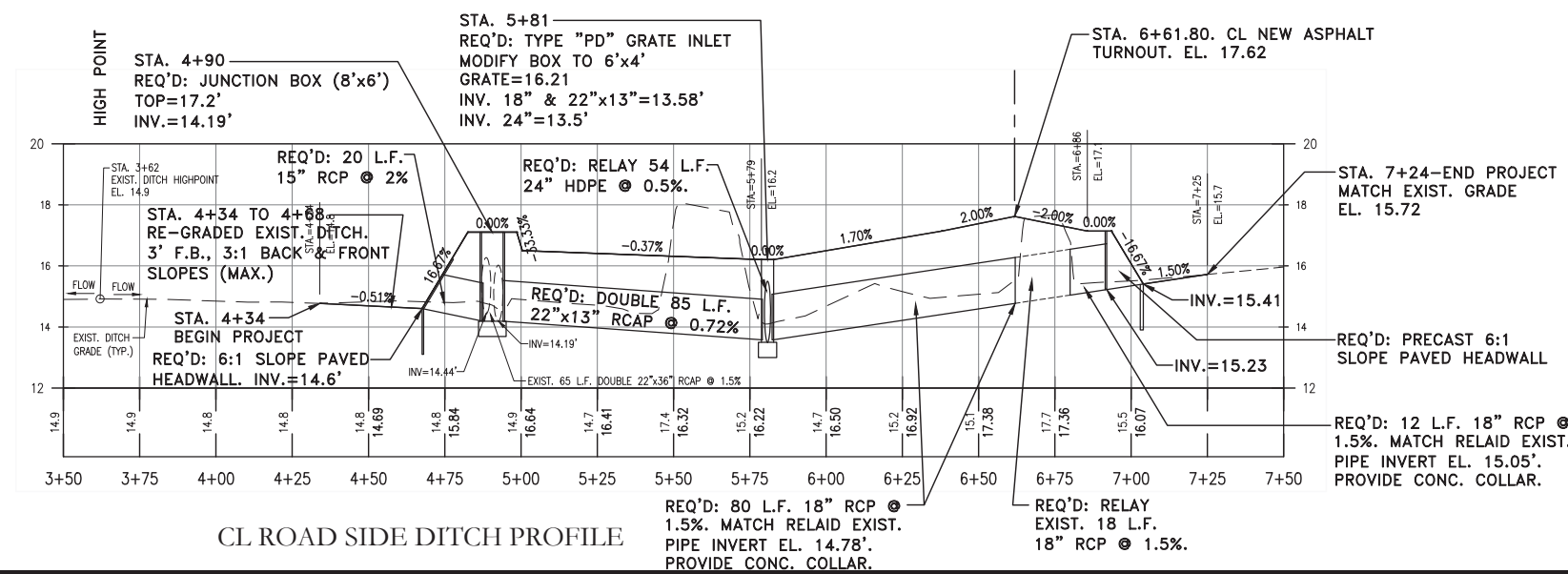
ART CENTER SITE IMPROVEMENTS

CITY OF ORANGE BEACH

SCALE:	1"=30'
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	6 OF 22



ALABAMA HIGHWAY 180 (100' R/W)
(POSTED 50 M.P.H.)

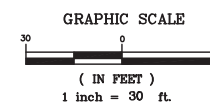


CL ROAD SIDE DITCH PROFILE

NUMBER:	REVISION:	DATE:
1.	REVISED PER A.L.D.O.T. COMMENTS	6/13/17

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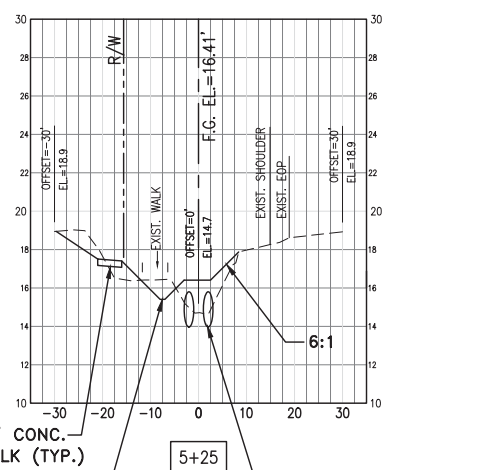
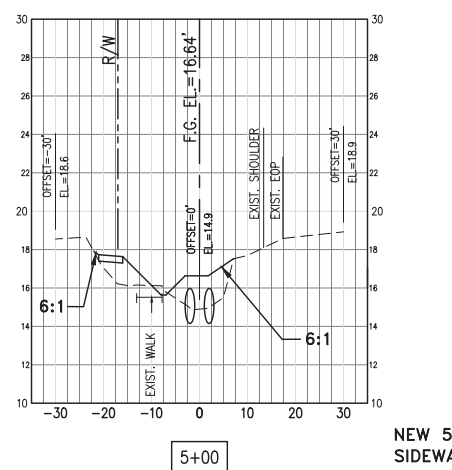
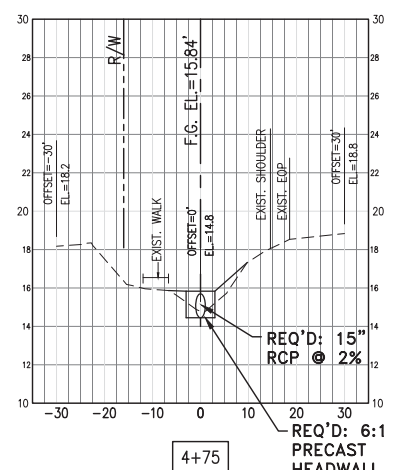
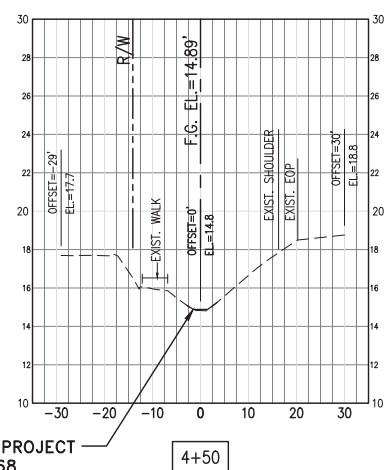
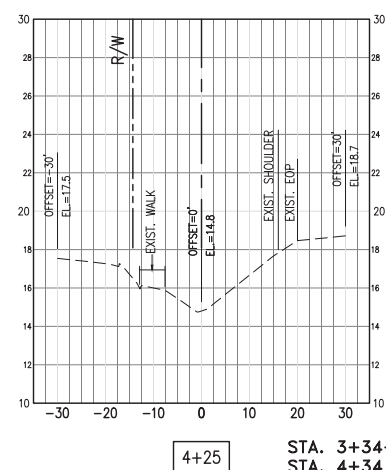
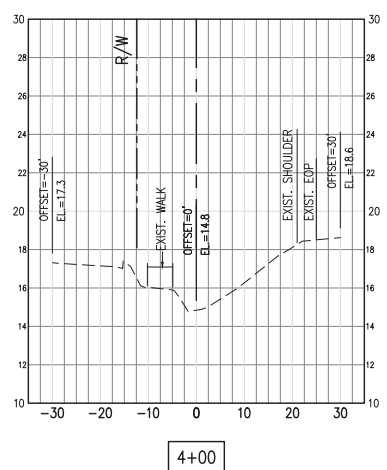
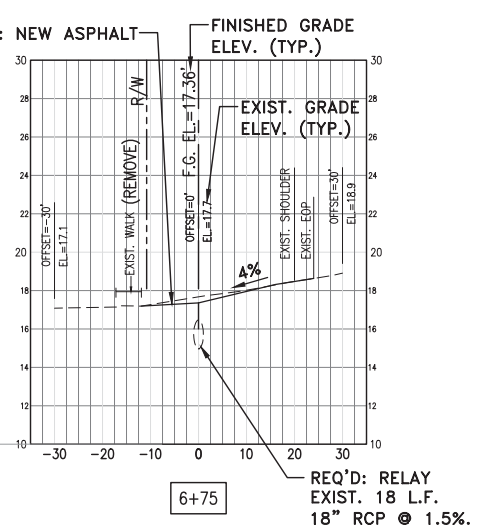
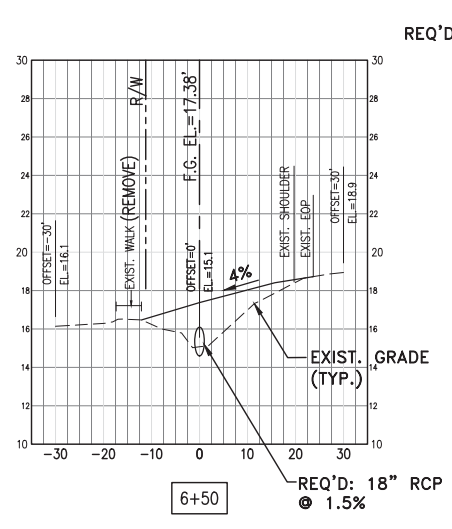
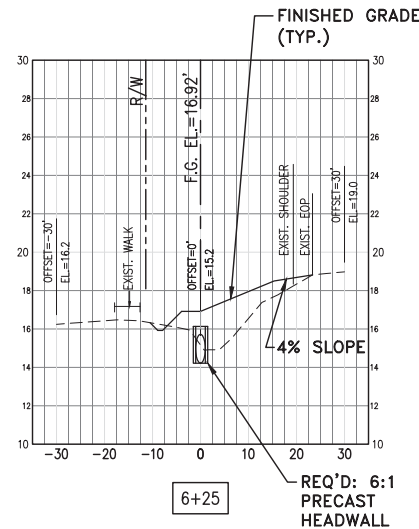
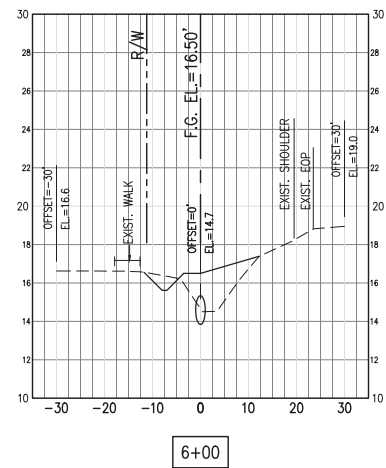
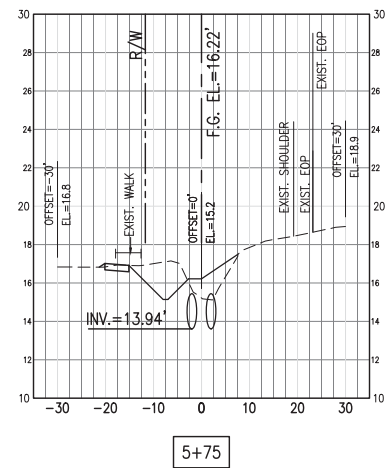
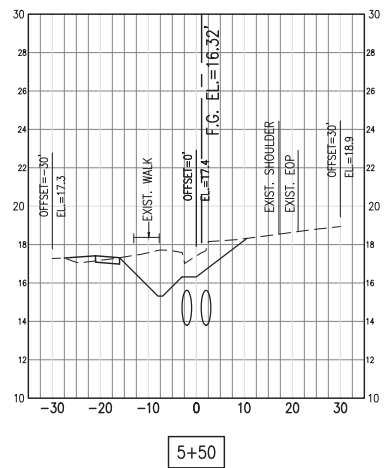
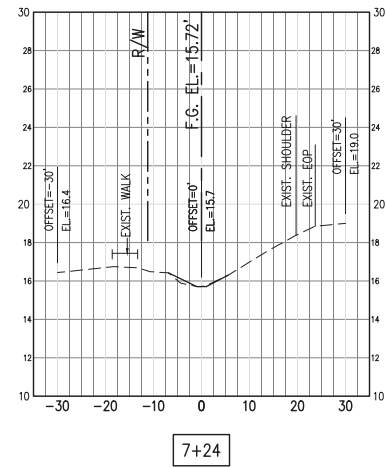
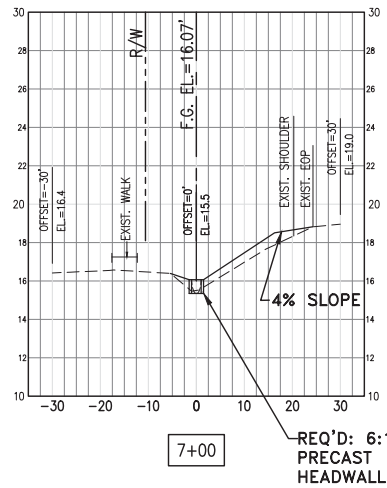


ROADSIDE DITCH: PLAN & PROFILE

ART CENTER SITE PLAN

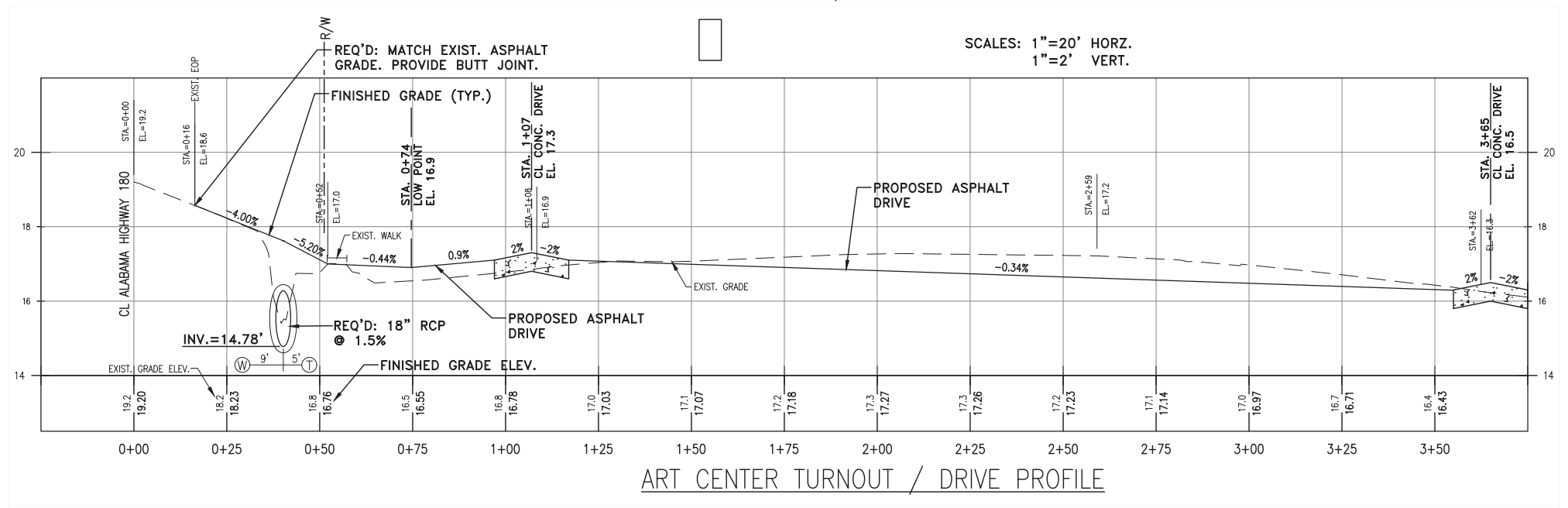
CITY OF ORANGE BEACH

SCALE:	1"=30' H., 1"=7.5' V.
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	7 OF 22



STA. 3+34-BEGIN PROJECT
 STA. 4+34 TO 4+68
 RE-GRADED EXIST. DITCH.
 3' F.B., 3:1 BACK & FRONT
 SLOPES (MAX.)

ROADSIDE DITCH SECTIONS ALONG THE NORTH SIDE OF ALABAMA HWY. 180



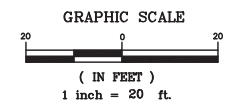
SCALES: 1"=20' HORZ.
 1"=2' VERT.

ART CENTER TURNOUT / DRIVE PROFILE

NUMBER:	REVISION:	DATE:
1.	REVISED PER A.L.D.O.T. COMMENTS	6/13/17

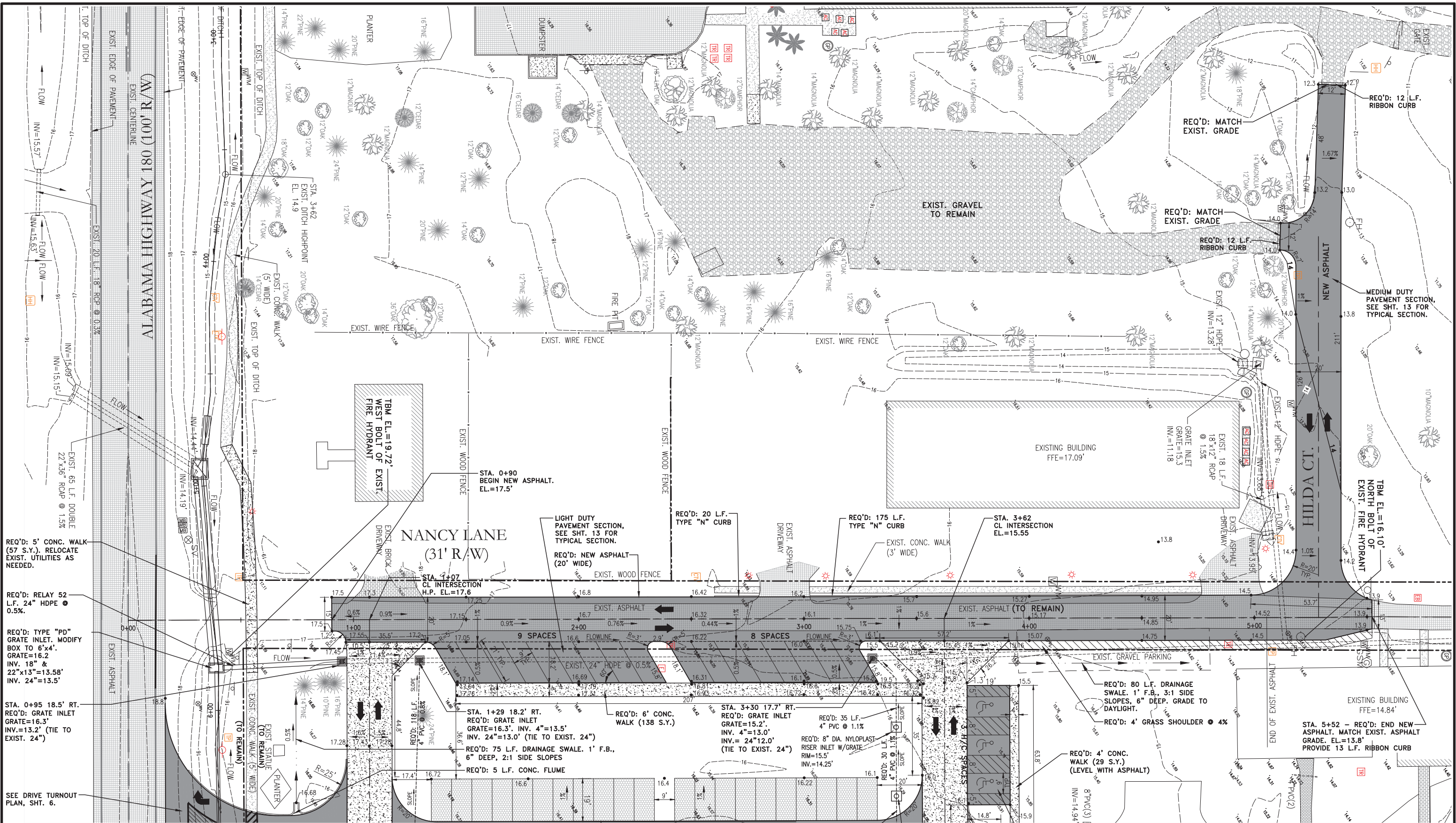
SCALES: 1"=20' HORZ.
 1"=5' VERT.

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ROADSIDE DITCH SECTIONS
 ART CENTER SITE IMPROVEMENTS
 CITY OF ORANGE BEACH

SCALE:	AS SHOWN
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	8 OF 22



SEE SHIT. 10 FOR CONTINUATION.

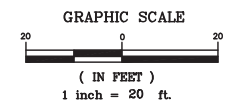
NUMBER:	REVISION:	DATE:
1.	REVISED PER CITY COMMENTS	6/13/17



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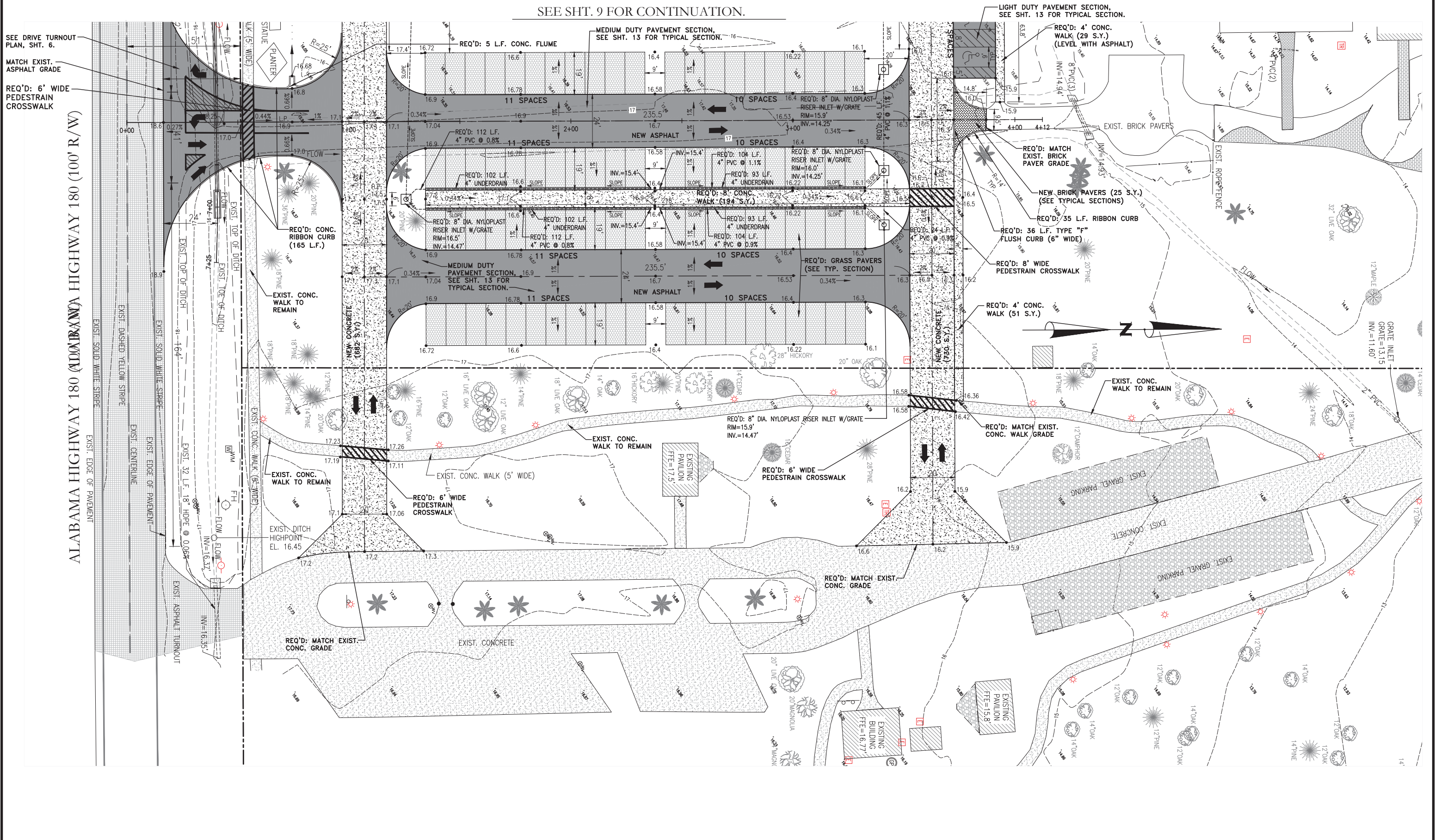
11143 Old Highway 31 Spanish Fort, AL 36527 Phone: (251) 544-7900
 818 N. McKenzie Street Foley, AL 36635 Phone: (251) 970-7900



CENTRAL SITE PLAN
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	1"=20'
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	9 OF 22

SEE SHT. 9 FOR CONTINUATION.



ALABAMA HIGHWAY 180 (ADJACENT) HIGHWAY 180 (100' R/W)

SEE DRIVE TURNOUT PLAN, SHT. 6.
MATCH EXIST. ASPHALT GRADE
REQ'D: 6' WIDE PEDESTRAIN CROSSWALK

LIGHT DUTY PAVEMENT SECTION, SEE SHT. 13 FOR TYPICAL SECTION.
REQ'D: 4' CONC. WALK (29 S.Y.) (LEVEL WITH ASPHALT)

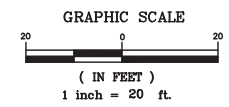
MEDIUM DUTY PAVEMENT SECTION, SEE SHT. 13 FOR TYPICAL SECTION.
REQ'D: 5 L.F. CONC. FLUME



NUMBER:	REVISION:	DATE:
1.	REVISED PER CITY COMMENTS	6/13/17

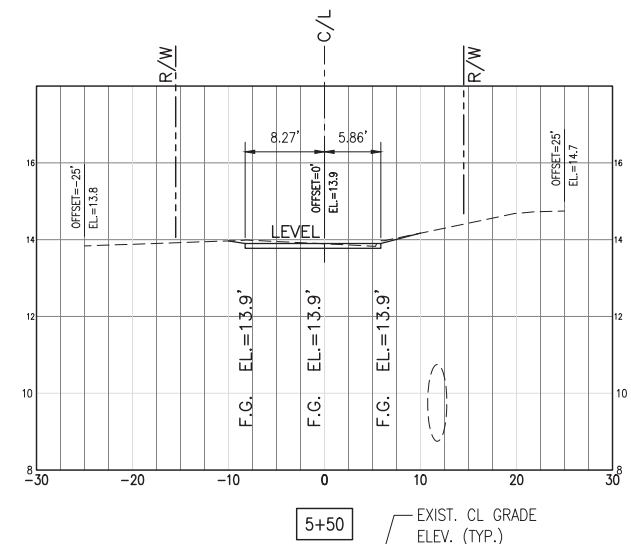
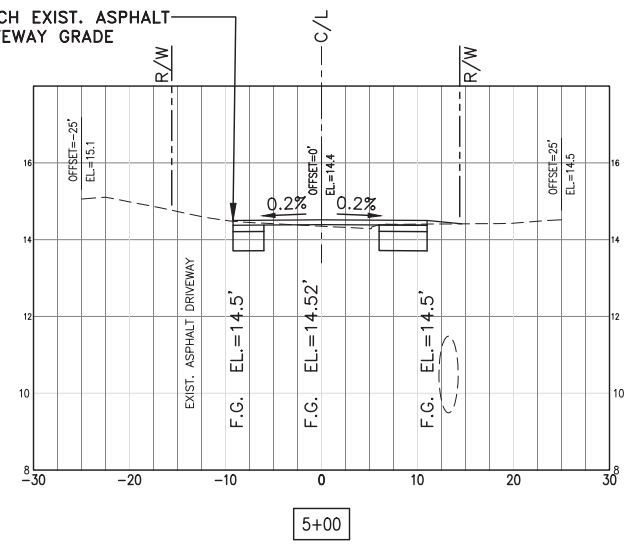
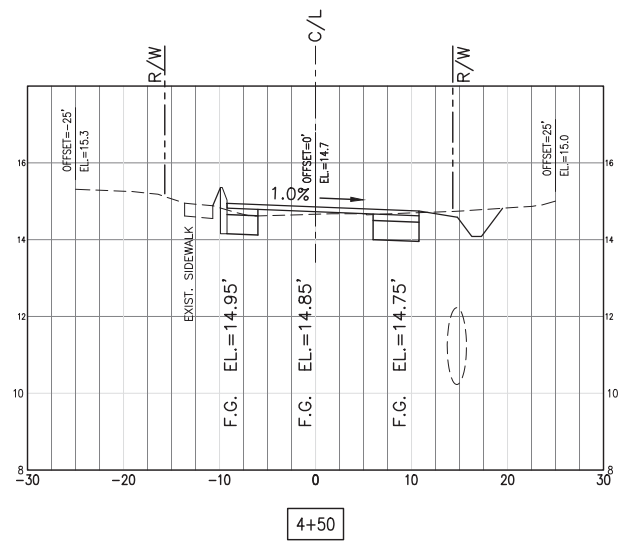
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818 N. McKenzie Street Foley, AL 36635 Phone: (251) 970-7900

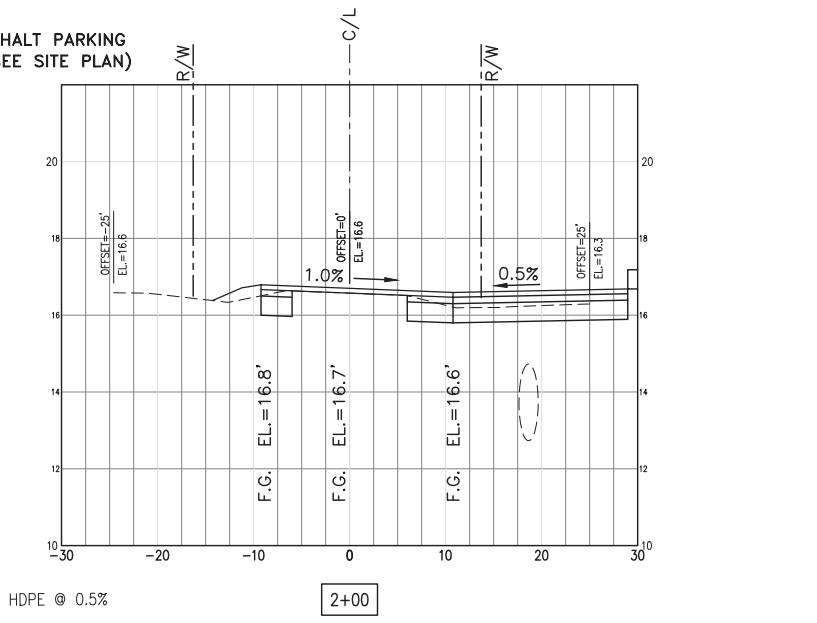
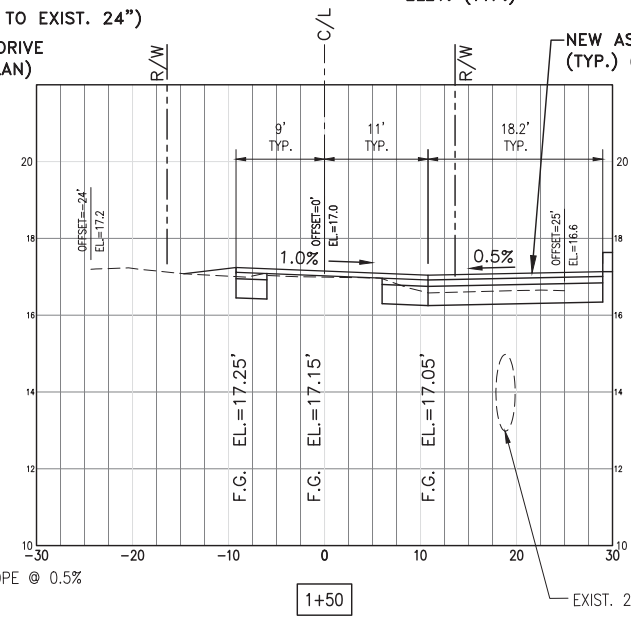
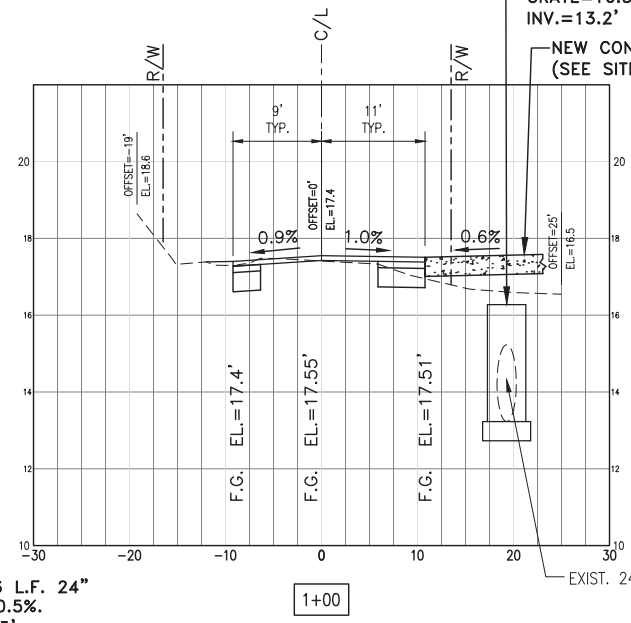
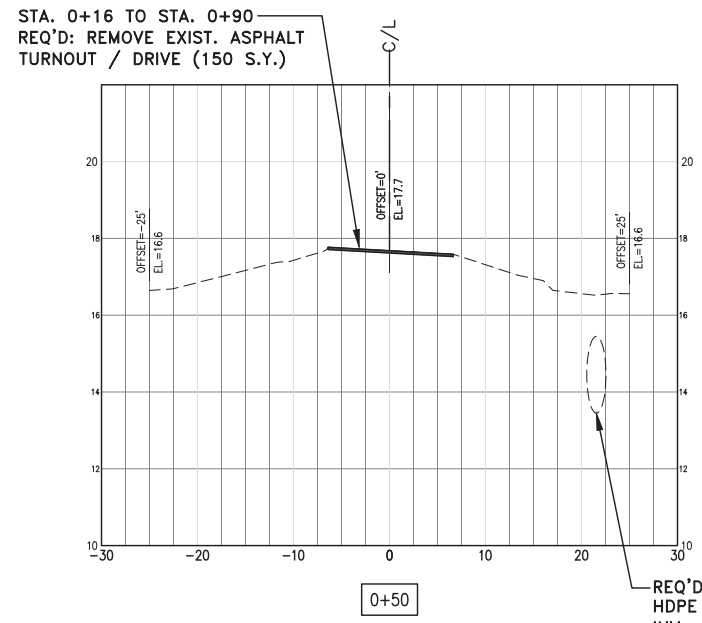
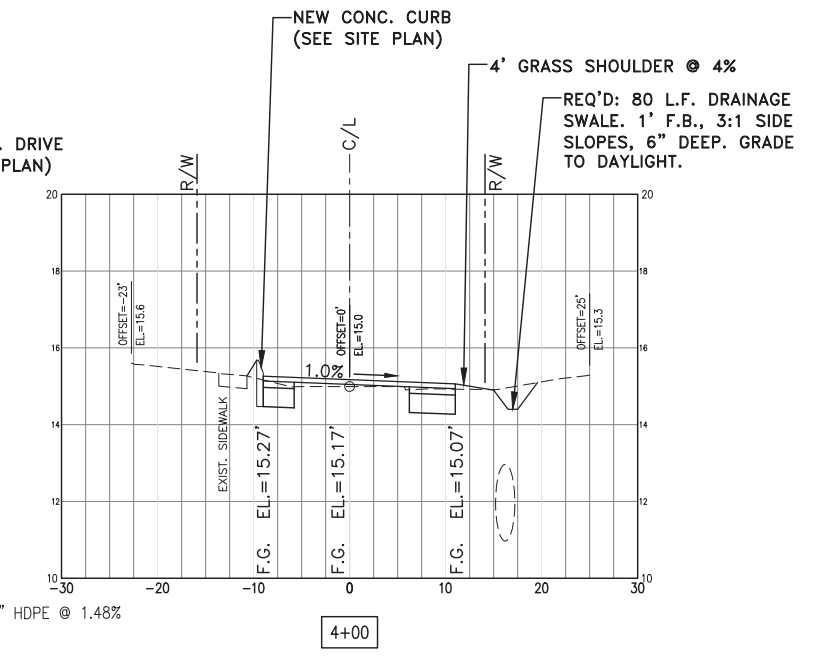
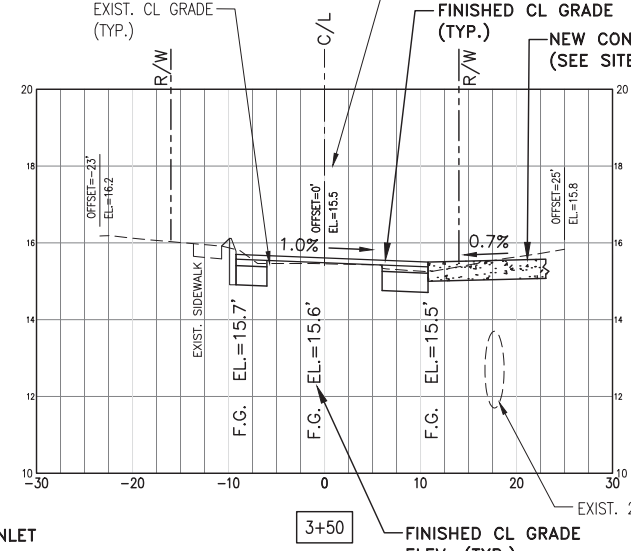
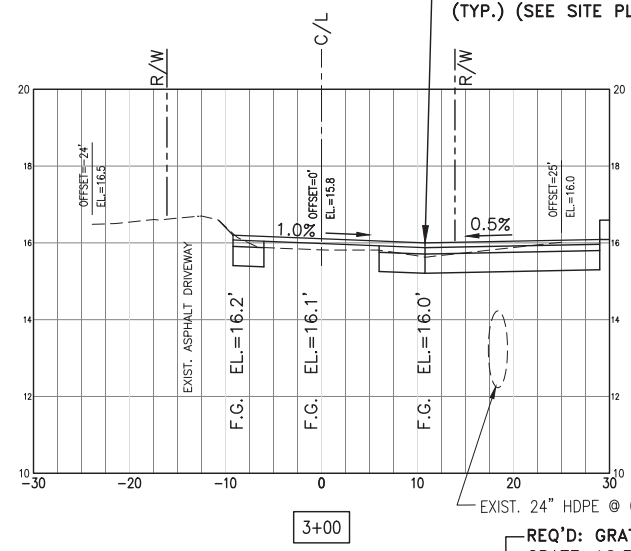
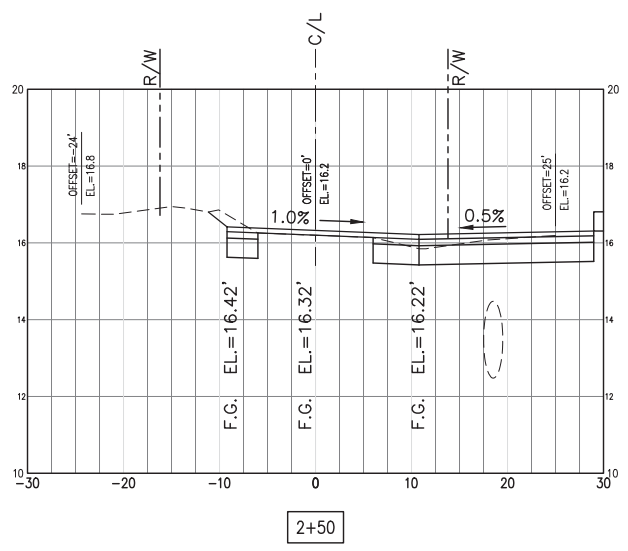


EAST SIDE SITE PLAN
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	1"=20'
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	10 OF 22



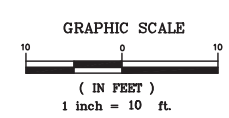
SCALES: 1"=10' HORZ.
1"=2.5' VERT.



NUMBER:	REVISION:	DATE:
1.	REVISED PER CITY COMMENTS	6/13/17

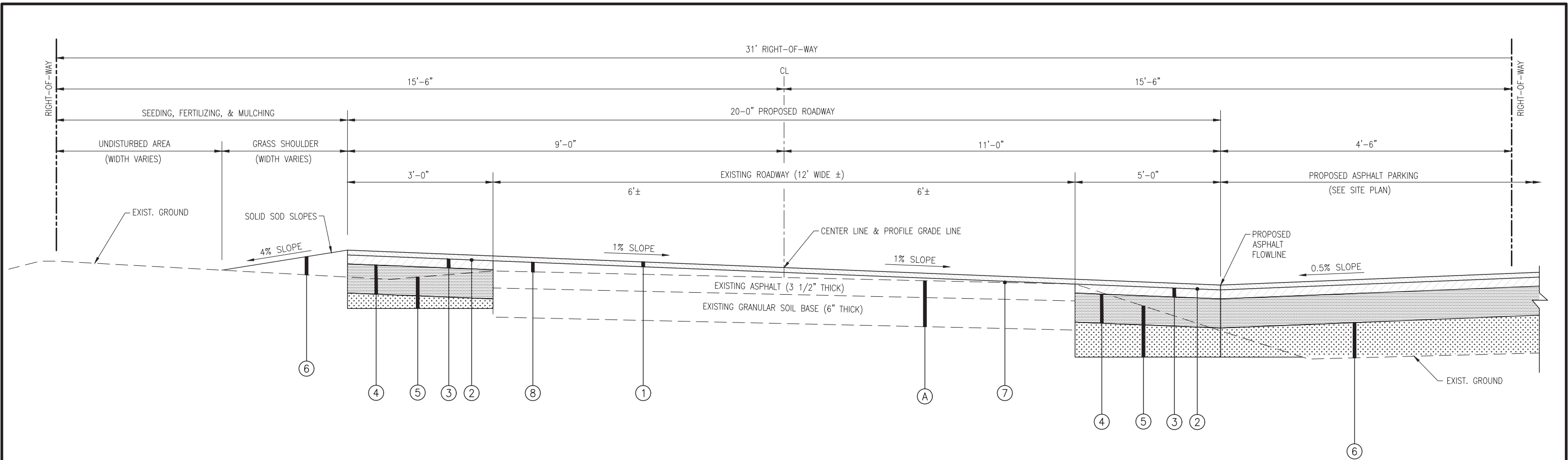
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CONSULTING, LLC
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NANCY LANE ROAD SECTIONS
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	1"=10'
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	11 OF 22



TYPICAL ROADWAY SECTION
N.T.S.

- (A) EXISTING PAVEMENT SECTION TO REMAIN
- (1) 1" ALDOT SECTION 424-A, BITUMINOUS WEARING SURFACE (110 LB/SY) (PER TON)
- (2) ALDOT SECTION 405, TACK COAT (PER GAL.)
- (3) 2" ALDOT SECTION 424-B, BITUMINOUS BINDER LAYER (220 LB/SY) (PER TON)
- (4) 6" COMPACTED THICKNESS, ALDOT SECTION 825, CRUSHED AGGREGATE BASE MATERIAL (100% MODIFIED DENSITY) (PER S.Y.)
- (5) ALDOT SECTION 210A, UNCLASSIFIED EXCAVATION (SEE SOILS REPORT AND/OR AS DIRECTED BY ENGINEER)
- (6) A-2-4 SELECT FILL (TOP 6" COMPACTED TO 100% STANDARD DENSITY)
- (7) ALDOT SECTION 408A, PLANING (MILLING) EXISTING PAVEMENT (AS DIRECTED BY ENGINEER) (PER TON)
- (8) ALDOT SECTION 424-B1, BITUMINOUS BINDER LAYER, LEVELING (VARIES 110 LB/SY TO 220 LB/SY) (PER TON)

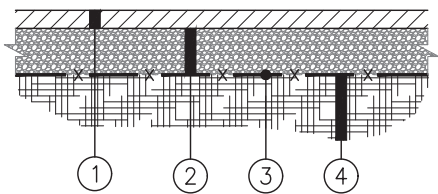
NUMBER:	REVISION:	DATE:

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NANCY LANE - TYPICAL ROAD SECTION
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

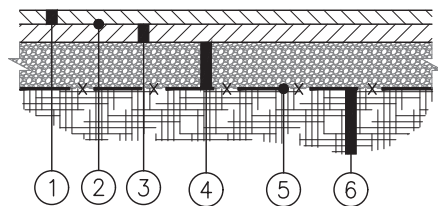
SCALE:	N.T.S.
DATE:	APRIL, 2017
DRAWN BY:	JC
CHECKED BY:	TEG
SHEET:	12 OF 22



**LIGHT-DUTY PAVEMENT SECTION
(PARKING AREAS ONLY)**

N.T.S.

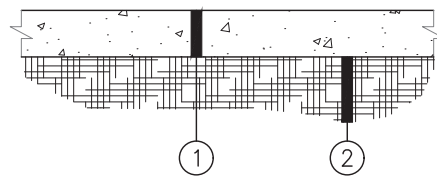
1. 1 1/2" ALDOT SECTION 424A, BITUMINOUS CONCRETE WEARING SURFACE (165 LB/SY)
2. 6" ALDOT SECTION 825, CRUSHED AGGREGATE BASE COURSE (COMPACTED TO 100% MODIFIED DENSITY)
3. SEPARATION FABRIC (TERRATEX GS OR APPROVED EQUAL)
4. 6" ALDOT SECTION 230 MODIFIED ROADBED (COMPACTED TO 100% STANDARD DENSITY)



MEDIUM-DUTY PAVEMENT SECTION

N.T.S.

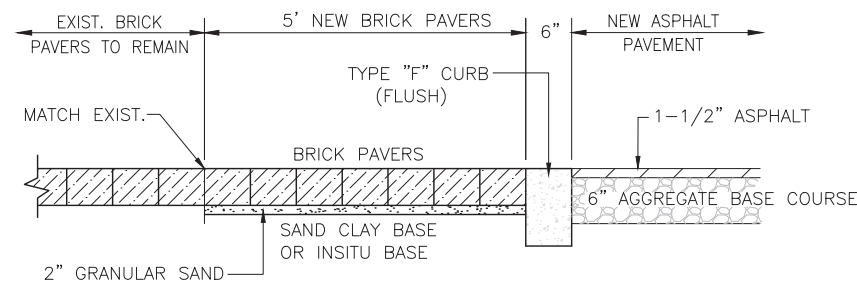
1. 1" ALDOT SECTION 424A, BITUMINOUS CONCRETE WEARING SURFACE (165 LB/SY)
2. ALDOT SECTION 405, TACK COAT
3. 1 1/2" ALDOT SECTION 424B, BITUMINOUS BINDER LAYER (165 LB/SY)
4. 6" ALDOT SECTION 825, CRUSHED AGGREGATE BASE COURSE (COMPACTED TO 100% MODIFIED DENSITY)
5. SEPARATION FABRIC (TERRATEX GS OR APPROVED EQUAL)
6. 6" ALDOT SECTION 230 MODIFIED ROADBED (COMPACTED TO 100% STANDARD DENSITY)



CONCRETE PAVEMENT SECTION

N.T.S.

1. 6" CONCRETE PAVEMENT (4,000 PSI COMPRESSIVE STRENGTH, 450 PSI FLEXURAL STRENGTH)
2. COMPACT NATIVE SUB-GRADE OR STRUCTURAL FILL (TOP 12" COMPACTED TO 100% STANDARD DENSITY)



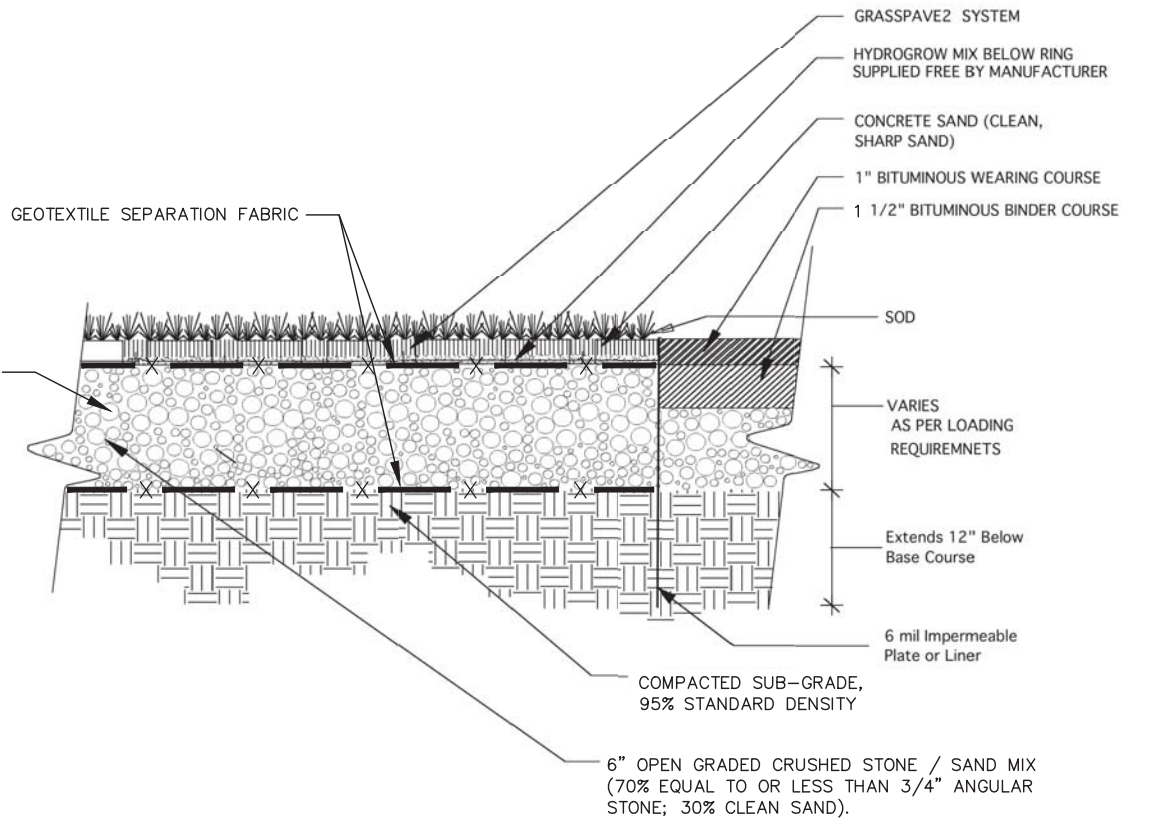
BRICK PAVER TYPICAL

N.T.S.

NOTE: ALL BEDDING AND BASE MATERIAL FOR SETTING BRICK PAVER SHALL BE A SUBSIDIARY OBLIGATION OF 999-A BRICK PAVERS.

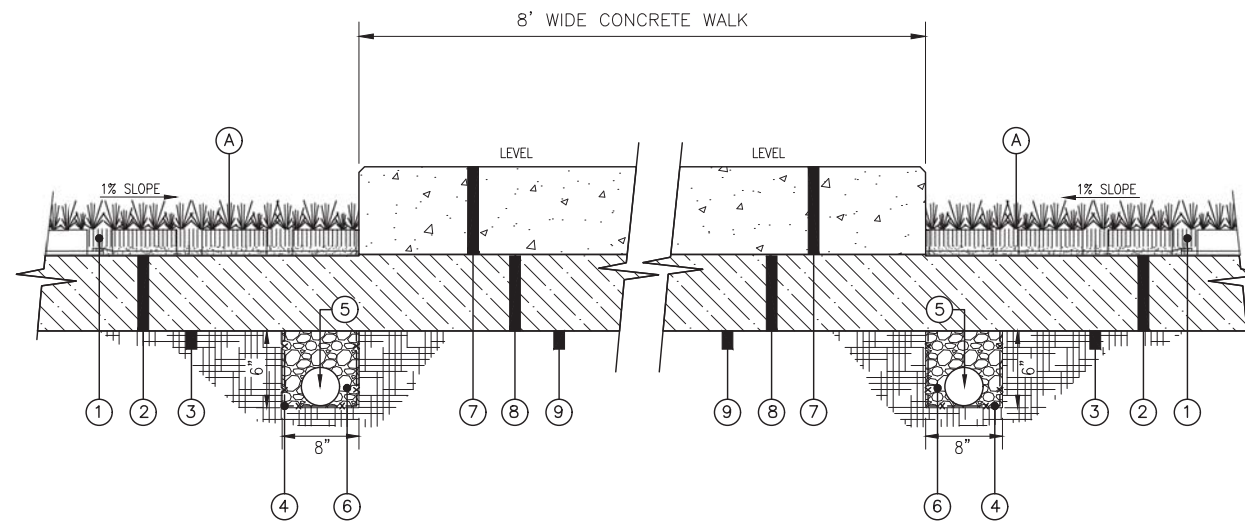
LIGHT-WEIGHT (6 OZ.) NON-WOVEN GEOTEXTILE SEPARATION FABRIC

STONE LAYER TO BE LIGHTLY ROLLED WITH A SMALL DRUM ROLLER COMPACTOR TO SEAT THE ANGULAR STONE IN-PLACE.



GRASSPAVE2 @ ASPHALT EDGE

N.T.S.



GRASSPAVE2 / UNDERDRAIN / SIDEWALK SECTION

N.T.S.

- (A) SOLID SOD - BERMUDA
- (1) GRASSPAVE2 POROUS PAVEMENT AS MANUFACTURED BY INVISIBLE STRUCTURES INC., OR APPROVED EQUAL WITH 1" OF WASHED CONCRETE SAND
- (2) SANDY GRAVEL BASE MIX, 70% EQUAL TO OR LESS THAN 3/4" ANGULAR STONE; 30% CLEAN SAND, 6" COMPACTED THICKNESS
- (3) COMPACTED SUB-GRADE (COMPACT TO 95% STANDARD DENSITY)
- (4) FILTER CLOTH - WRAP FULL PERIMETER OF UNDERDRAIN
- (5) 4" DIA. PERFORATED PVC PIPE
- (6) NO. 57 STONE (DRAINAGE LAYER)
- (7) CONCRETE SIDEWALK, 4,000 PSI, 6" THICK W/ NO. 5 BARS @ 12" E.W.
- (8) SANDY GRAVEL BASE MIX, 70% EQUAL TO OR LESS THAN 3/4" ANGULAR STONE; 30% CLEAN SAND, 6" COMPACTED THICKNESS
- (9) COMPACTED SUB-GRADE (COMPACT TO 95% STANDARD DENSITY)

NUMBER:	REVISION:	DATE:



Sawgrass CONSULTING, LLC

 ENGINEERING - SURVEYING - CONSTRUCTION MANAGEMENT

11143 Old Highway 31 Spanish Fort, AL 36527 Phone: (251) 544-7900

 818 N. McKenzie Street Foley, AL 36535 Phone: (251) 970-7900

CONSTRUCTION DETAILS
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	N.T.S.
DATE:	APRIL, 2017
DRAWN BY:	J.C.
CHECKED BY:	TEG
SHEET:	13 OF 22

Engineered Surface Drainage Products

GENERAL

PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS

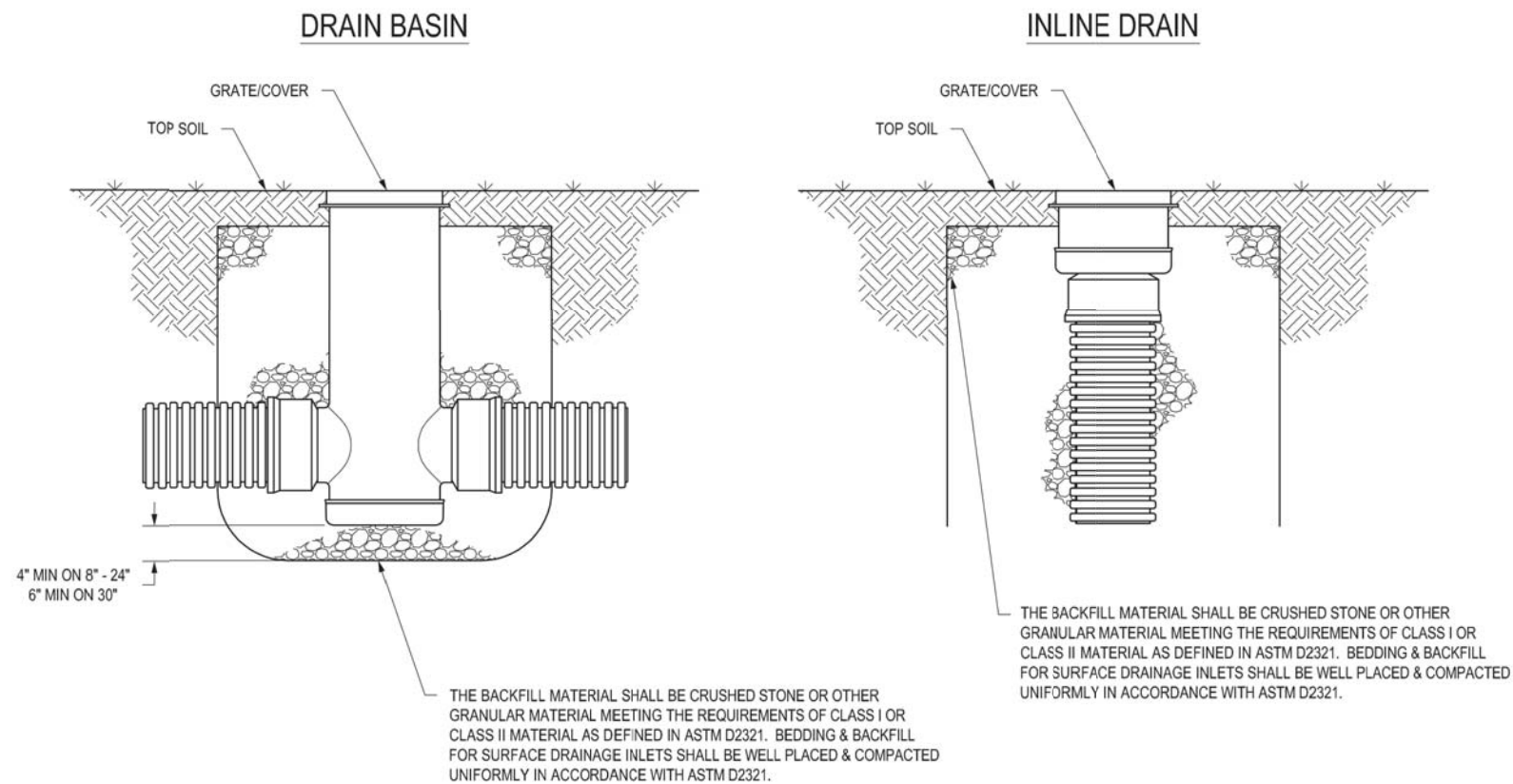
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 8", 10", 12", 15", 18", 24" and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

INSTALLATION

The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or class 2 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

NON TRAFFIC INSTALLATION



NYLOPLAST DRAINAGE DETAILS & SPECIFICATIONS
N.T.S.

NUMBER:	REVISION:	DATE:

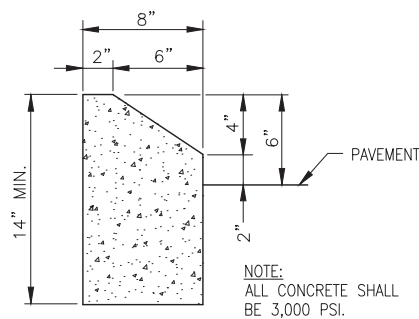


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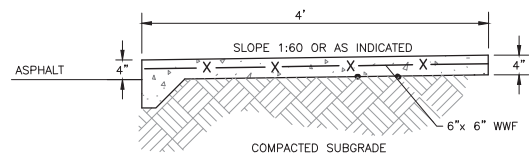
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CONSTRUCTION DETAILS
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

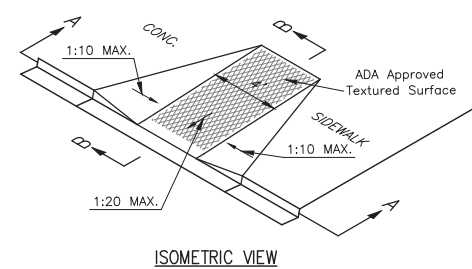
SCALE:	N.T.S.
DATE:	APRIL, 2017
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SHEET:	14 OF 22



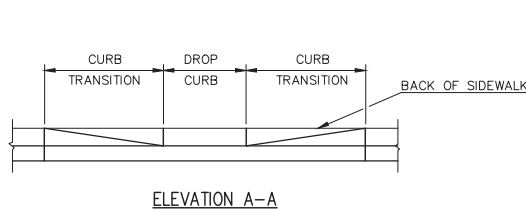
TYPE "N" CONCRETE CURB
FOR USE ON LANDSCAPE ISLANDS
N.T.S.



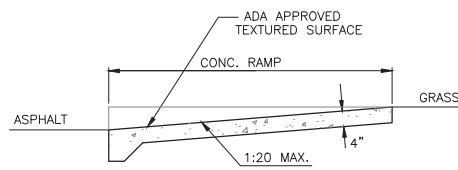
CONCRETE SIDEWALK
N.T.S.



ISOMETRIC VIEW

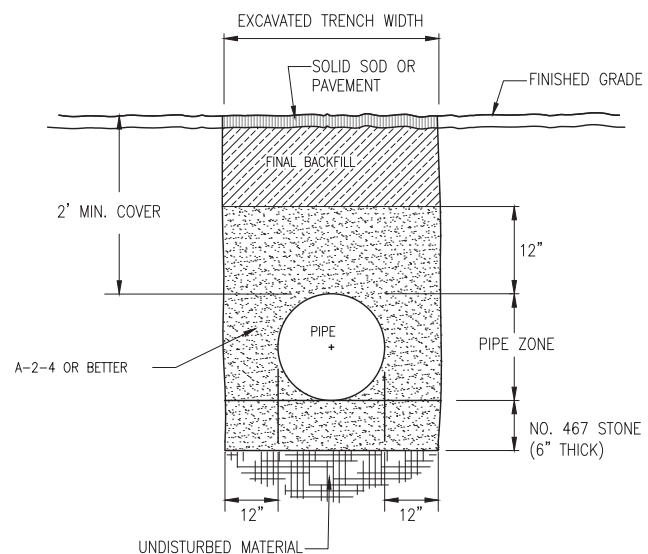


ELEVATION A-A

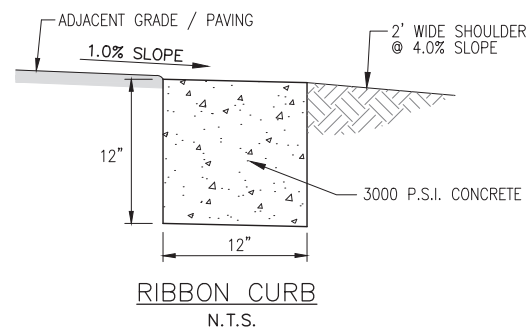


SECTION B-B
SIDEWALK HANDICAP RAMP
N.T.S.

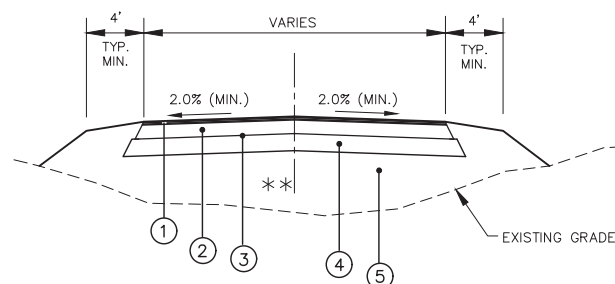
- NOTES:**
- RAMPS ARE DESIGNED TO THE UNIFORM FEDERAL ACCESSIBILITY STANDARDS TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT.
 - RAMPS SHALL HAVE A TACTILE SURFACE, TEXTURED TO A DEPTH NOT EXCEEDING 1/8" BY USE OF TAMP OR ROLLER.



OUTFALL TRENCH BACKFILL DETAIL
N.T.S.



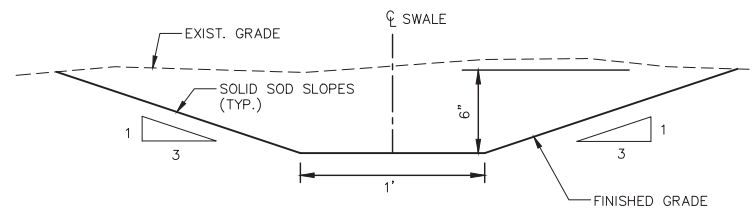
RIBBON CURB
N.T.S.



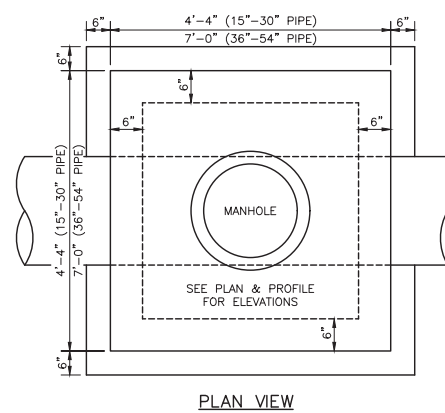
- SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D, APPROXIMATELY 135 POUNDS PER SQUARE YARD.
- SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D, APPROXIMATELY 330 POUNDS PER SQUARE YARD.
- BITUMINOUS TREATMENT A, ITEM: 401A-000
- CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6" COMPACTED THICKNESS, ITEM: 301A-012
- BORROW EXCAVATION [(A-2-4(0) OR A-4(0)], ITEM: 210D-012

** NOTE: COMPACT TO 100% OF AASHTO T-99

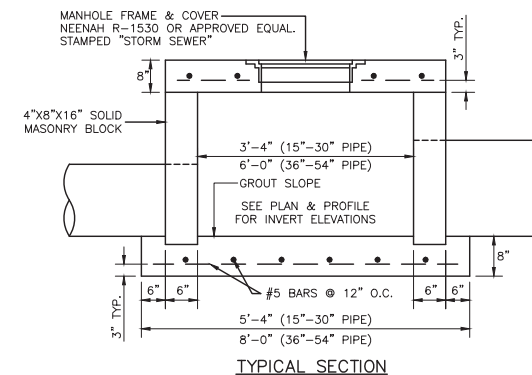
TYPICAL DRIVE SECTION TO R.O.W.
NTS



DRAINAGE SWALE DETAIL
N.T.S.

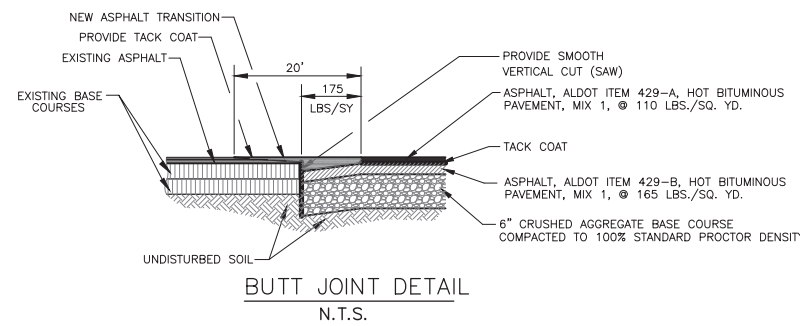


PLAN VIEW

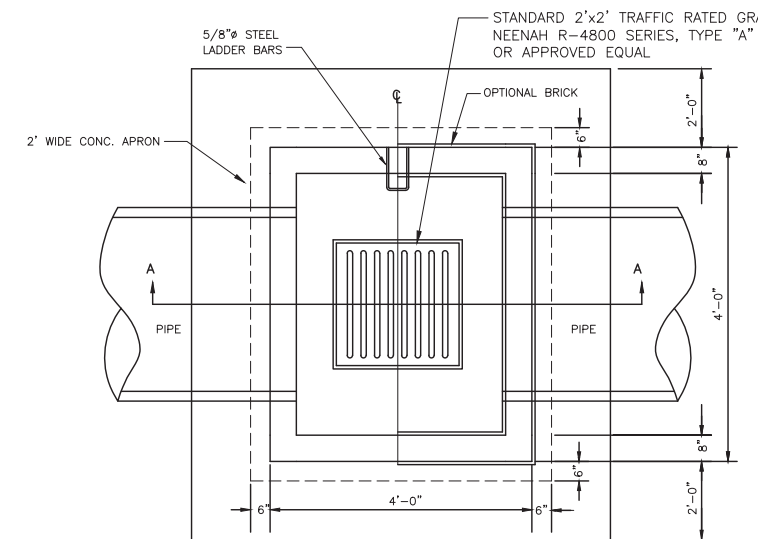


JUNCTION BOX DETAIL
N.T.S.

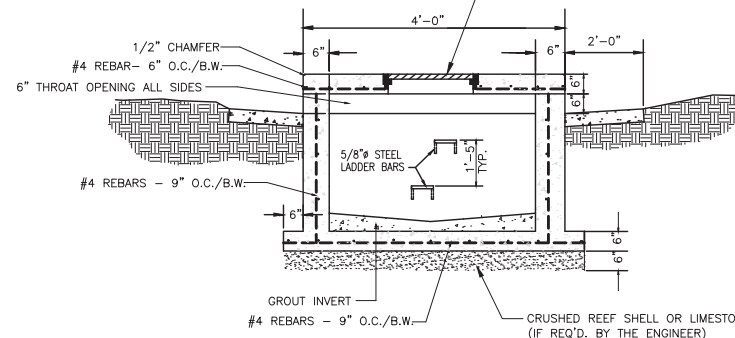
NOTE: STEPS REQUIRED FOR BOX HEIGHTS 4'-0" AND GREATER.



BUTT JOINT DETAIL
N.T.S.

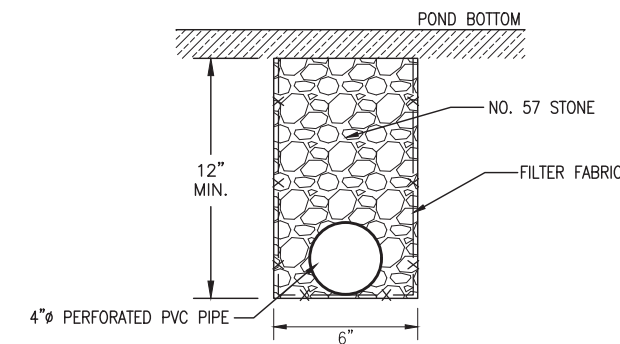


PLAN



SECTION "A-A" ELEVATION

GRATE INLET DETAIL W/ CONCRETE APRON
N.T.S.



UNDERDRAIN/TRENCH DETAIL
N.T.S.

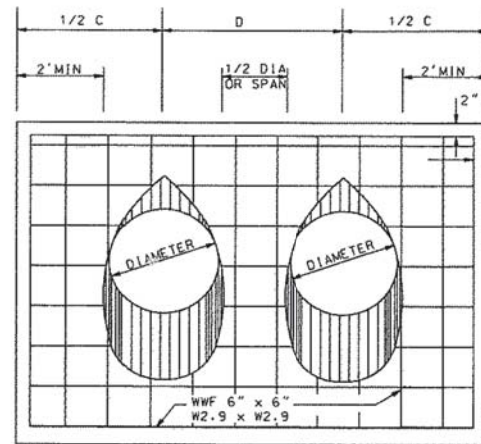
NUMBER:	REVISION:	DATE:

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Phone: (251) 544-7900
Phone: (251) 970-7900

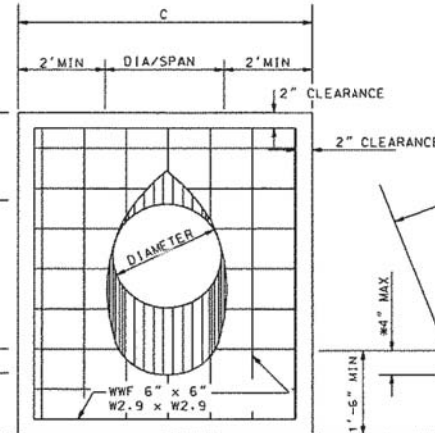
CONSTRUCTION DETAILS
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

SCALE:	N.T.S.
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CHECKED BY:	TEG
SHEET:	15 OF 22

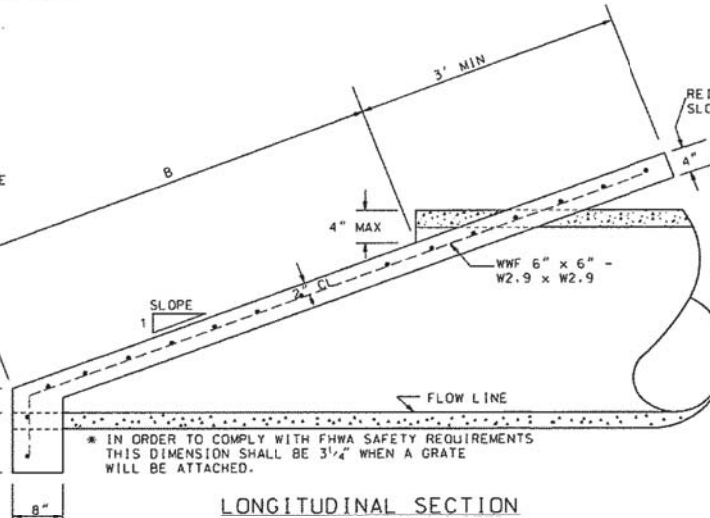
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO



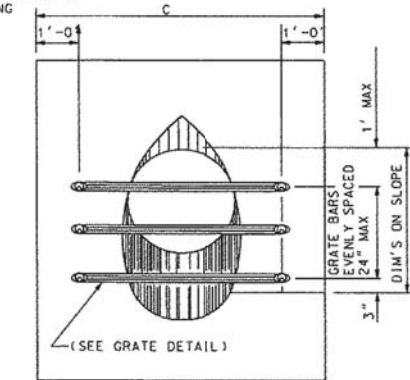
END ELEVATION DOUBLE BARREL



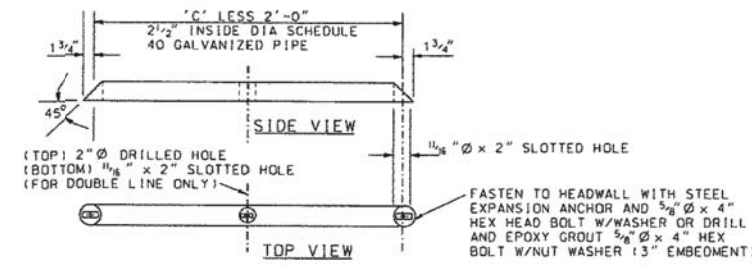
END ELEVATION SINGLE BARREL



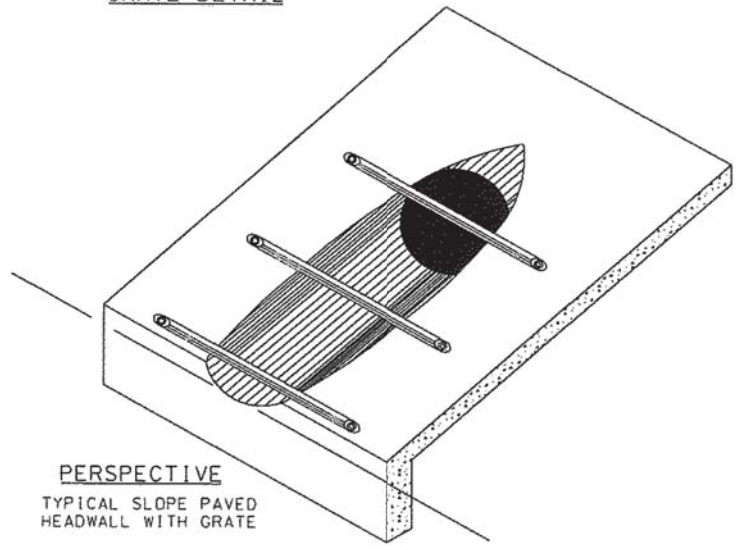
LONGITUDINAL SECTION



END ELEVATION WITH GRATE



GRATE DETAIL



PERSPECTIVE TYPICAL SLOPE PAVED HEADWALL WITH GRATE

PIPE SIZE	AREA SQ FT	SLOPE	DIMENSIONS AND QUANTITIES			CU YDS ONE BARREL	CU YDS ADDITIONAL BARREL
			B	C	D		
15"Ø	1.2	4:1	2'-5"	5'-3"	1'-11"	0.92	0.30
18"Ø	1.8	4:1	3'-6"	5'-6"	2'-3"	1.06	0.36
24"Ø	3.1	4:1	5'-6"	6'-0"	3'-0"	1.32	0.52
30"Ø	4.9	4:1	7'-7"	6'-6"	3'-9"	1.60	0.72
36"Ø	7.1	4:1	9'-8"	7'-0"	4'-6"	1.86	0.94
42"Ø	9.6	4:1	11'-9"	7'-6"	5'-3"	2.20	1.20
48"Ø	12.6	4:1	13'-9"	8'-0"	6'-0"	2.40	1.46
54"Ø	15.9	4:1	15'-10"	8'-6"	6'-9"	2.60	1.76
15"Ø	1.2	6:1	3'-7"	5'-3"	1'-11"	1.04	0.30
18"Ø	1.8	6:1	5'-1"	5'-6"	2'-3"	1.22	0.40
24"Ø	3.1	6:1	8'-1"	6'-0"	3'-0"	1.58	0.60
30"Ø	4.9	6:1	11'-2"	6'-6"	3'-9"	1.94	0.84
36"Ø	7.1	6:1	14'-2"	7'-0"	4'-6"	2.30	1.12
42"Ø	9.6	6:1	17'-3"	7'-6"	5'-3"	2.68	1.42
48"Ø	12.6	6:1	20'-3"	8'-0"	6'-0"	3.04	1.78
54"Ø	15.9	6:1	23'-4"	8'-6"	6'-9"	3.40	2.18
15"Ø	1.2	10:1	5'-10"	5'-3"	1'-11"	1.24	0.32
18"Ø	1.8	10:1	8'-4"	5'-6"	2'-3"	1.54	0.46
24"Ø	3.1	10:1	13'-5"	6'-0"	3'-0"	2.08	0.72
30"Ø	4.9	10:1	18'-5"	6'-6"	3'-9"	2.66	1.06
36"Ø	7.1	10:1	23'-5"	7'-0"	4'-6"	3.20	1.46
42"Ø	9.6	10:1	28'-6"	7'-6"	5'-3"	3.78	1.90
48"Ø	12.6	10:1	33'-6"	8'-0"	6'-0"	4.32	2.42
54"Ø	15.9	10:1	38'-6"	8'-6"	6'-9"	4.88	3.02
15"Ø	1.2	20:1	11'-9"	5'-3"	1'-11"	1.84	0.42
18"Ø	1.8	20:1	16'-8"	5'-6"	2'-3"	2.40	0.62
24"Ø	3.1	20:1	26'-8"	6'-0"	3'-0"	3.38	1.06

GENERAL NOTES

1. THE FILL IS TO BE PLACED AND ALL SHORING REMOVED BEFORE THE SLOPE PAVING IS PLACED.
2. QUANTITIES SHOWN INCLUDE TWO (2) SLOPE PAVED HEADWALLS WITH TOE WALLS.
3. DIMENSIONS AND QUANTITIES SHOWN APPLIES TO CONCRETE, CORRUGATED METAL PIPE, AND CORRUGATED HDPE PIPE. CONCRETE QUANTITIES ARE SUFFICIENT WHEN HEADWALLS FOR ARCH PIPE IS DESIRABLE.
4. CONCRETE PIPE SHALL BE BEVELED BY SAWING AFTER SLOPE PAVING HAS BEEN PLACED AND SUFFICIENTLY CURED (SOME HAND FINISHING MAY BE NECESSARY.) METAL PIPE SHALL BE SHOP CUT. CORRUGATED HDPE PIPE MAY BE FIELD BEVELED PRIOR TO PAVING OR SHOP CUT.
5. CONTRACTOR SHALL INSURE THROUGH MECHANICAL MEANS OR OTHER APPROVED DEVICES THAT CONNECTION BETWEEN BEVELED PIPE END AND CONCRETE WILL NOT BE DETACHED. CORRUGATED HDPE PIPE SHALL HAVE 1/2" Ø x 6" GALVANIZED HOOK BOLTS WITH WASHERS LOCATED AT 30" OC FOR THE TOE AND 1/2" Ø x 6" GALVANIZED THREADED HEX HEAD BOLTS WITH WASHERS LOCATED ON 2'-0" CENTERS FOR SIDES. ANCHOR BOLTS INTO CONCRETE.
6. SLOPE PAVED HEADWALL WITHOUT GRATE SHALL BE CLASS 1. SLOPE PAVED HEADWALL WITH GRATE SHALL BE CLASS 2.
7. A 24" PIPE WITH GREATER THAN A 30° SKEW AND 30" OR GREATER IN DIAMETER SHALL HAVE A CLASS 2 END TREATMENT WHEN TERMINATED WITHIN THE CLEAR ZONE.
8. PIPE FOR GRATE SHALL BE SCHEDULE 40, GALVANIZED (ASTM A53) HARDWARE SHALL BE GALVANIZED ACCORDING TO SPECIFICATIONS.
9. RAW METAL EXPOSED BY CUTTING AND DRILLING OF PIPE FOR GRATE ASSEMBLY WILL REQUIRE A GALVANIZING REPAIR PAINT IN ACCORDANCE WITH SECTION 855.31 OF ALDOT SPECIFICATIONS.

--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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REVISIONS
1. Changed notes 3, 4, & 5 to allow the use of HDPE pipe. 09-12-97 by C.I.S.
2. Adjusted Note No. 7 requiring use of Grate on 01-02-09 by W.W.A.

ALABAMA DEPARTMENT OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING
CONCRETE SLOPE PAVED HEADWALL AND GRATE FOR SIDEDRAIN PIPE

Bureau S10 Engr: J.W.S.
DRAWN BY: DATE DRAWN: 02-08-91

SPECIAL DRAWING NO
HW-614-SP

INDEX NO
415

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ALDOT STATE STD. DRAWING

ART CENTER SITE IMPROVEMENTS

CITY OF ORANGE BEACH

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CHECKED BY:	TEG
SHEET:	16 OF 22

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO

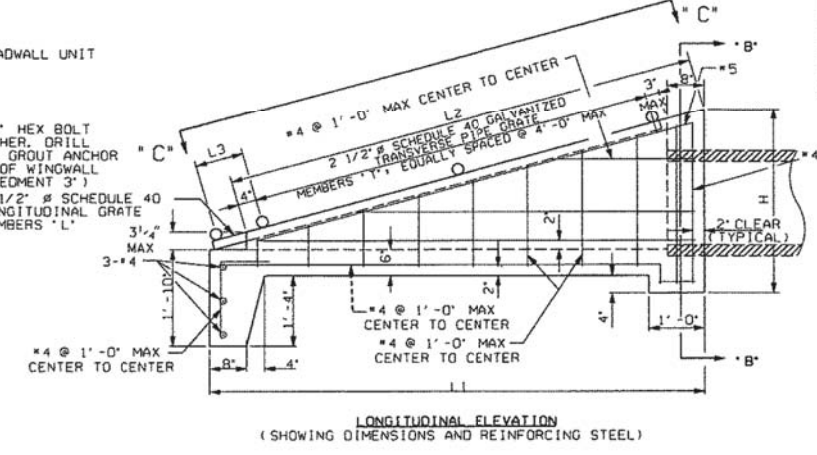
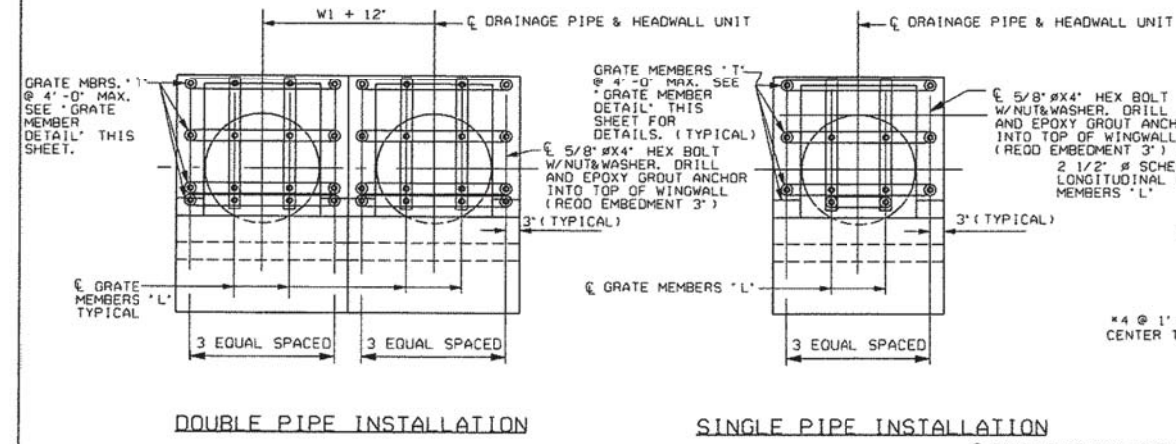
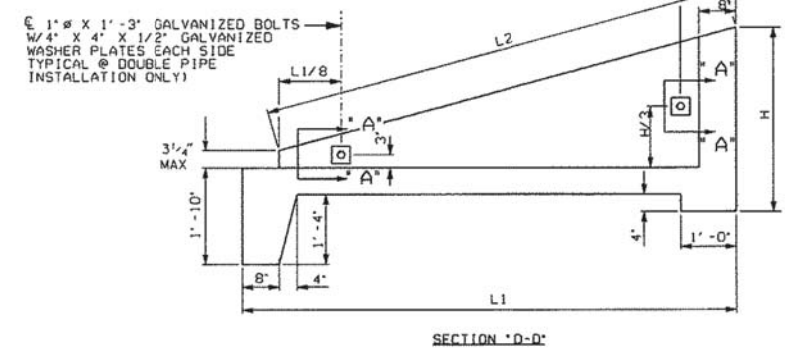
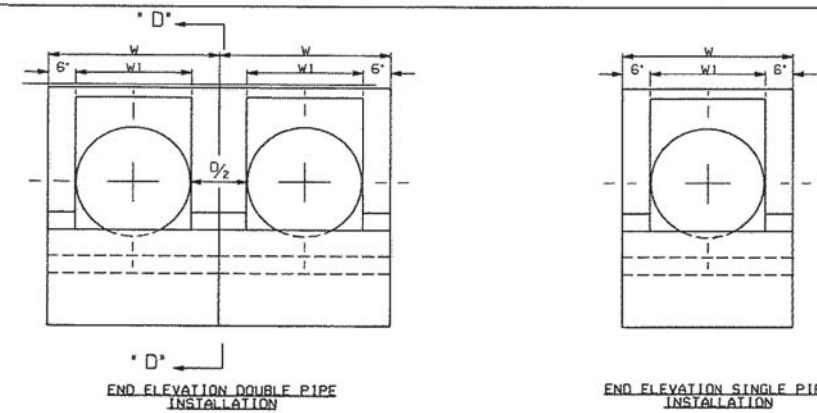
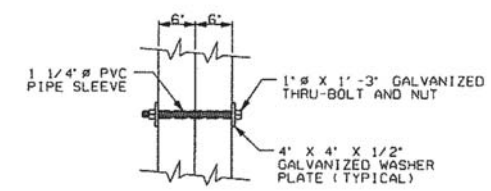


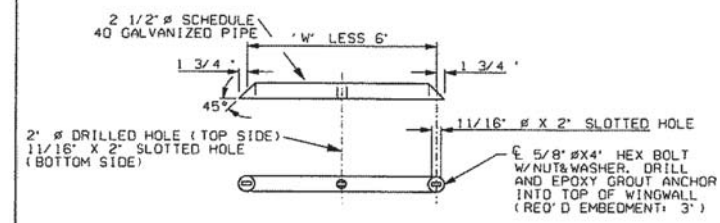
TABLE OF DIMENSIONS AND QUANTITIES

	PIPE DIA	H	L1	L2	L3	W	W1
3: ISLOPE	18"	3'-2"	6'-8"	6'-4"	1'-0"	2'-11"	1'-11"
	24"	3'-9"	8'-5"	8'-2"	1'-0"	3'-6"	2'-6"
	30"	4'-5"	10'-5"	9'-9"	1'-0"	4'-1"	3'-1"
4: ISLOPE	18"	3'-2"	8'-8"	8'-3"	1'-0"	2'-11"	1'-11"
	24"	3'-9"	11'-0"	10'-8"	1'-0"	3'-6"	2'-6"
	30"	4'-5"	13'-8"	13'-0"	1'-0"	4'-1"	3'-1"
5: ISLOPE	18"	3'-2"	12'-8"	12'-1"	1'-0"	2'-11"	1'-11"
	24"	3'-9"	16'-2"	15'-9"	1'-0"	3'-6"	2'-6"

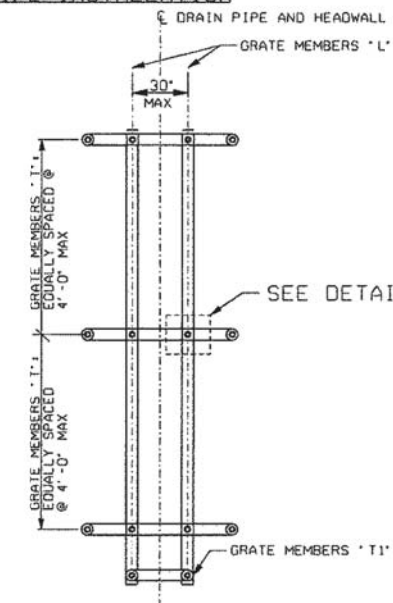
- GENERAL NOTES
- 28 DAY CONCRETE COMPRESSIVE STRENGTH: TO BE 4000 P.S.I.
 - REINFORCING STEEL: TO BE IN ACCORDANCE WITH SPECIFICATIONS. MINIMUM YIELD STRENGTH=60 K.S.I.
 - PIPE FOR GRATE TO BE IN ACCORDANCE WITH ASTM A53 GRADE B OR ASTM A501. PIPE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A53. THRU-BOLTS, WASHER PLATES, AND NUTS AND EXPANSION BOLTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO SPECIFICATIONS.
 - METAL SURFACES EXPOSED BY CUTTING AND DRILLING OF PIPE GRATE ASSEMBLY WILL REQUIRE A GALVANIZING REPAIR PAINT IN ACCORDANCE WITH SECTION 855.15 OF THE SPECIFICATIONS.
 - THE PRECAST CONCRETE END SECTIONS ARE LIMITED TO 0° THRU 15° SKEW.
 - PRECAST CONCRETE END SECTIONS WITHOUT GRATES SHALL BE CLASS 1. PRECAST CONCRETE END SECTIONS WITH GRATES SHALL BE CLASS 2.
 - PIPE LARGER THAN 24" IN DIAMETER SHALL HAVE CLASS 2 CONCRETE END SECTIONS WHEN TERMINATED WITHIN THE CLEAR ZONE.



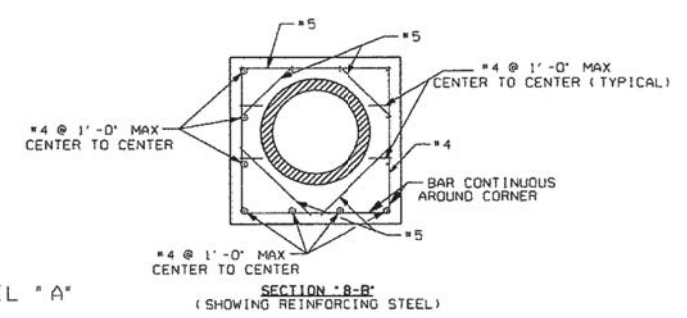
SECTION "A-A"
WALL CONNECTION DETAIL
(@ DOUBLE PIPE INSTALLATION ONLY)



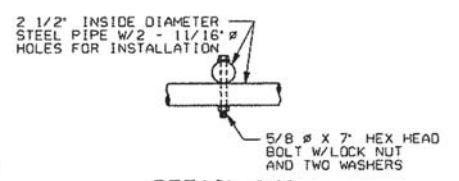
GRATE MEMBER DETAIL



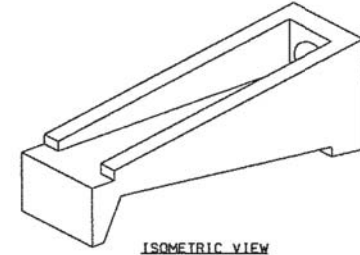
SECTION "C-C": GRATE ASSEMBLY



SECTION "B-B"
(SHOWING REINFORCING STEEL)



DETAIL "A-A"
(GRATE TO GRATE MEMBER CONNECTION)



ISOMETRIC VIEW

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REVISIONS

1. "W" and "H" dimensions on the 18 and 24" Pipe dia for 3:4 and 4:1 slope on the "TABLE OF DIMENSIONS AND QUANTITIES" were changed and transformed Pipe insertion into roadway from 4" to 8" on longitudinal section on 09-05-11 by J.F.T.

ALABAMA DEPARTMENT OF TRANSPORTATION
1405 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING
PRECAST SLOPE PAVED HEADWALL
DETAILS FOR RCP AND CMP
ROADWAY PIPE

Bureau Std Engr's Logo
DRAWN BY: J.E.L. DATE DRAWN: 04/23/2008

SPECIAL DRAWING NO
HW-614-B (PC) (SHEET 1 OF 2)

INDEX NO
411

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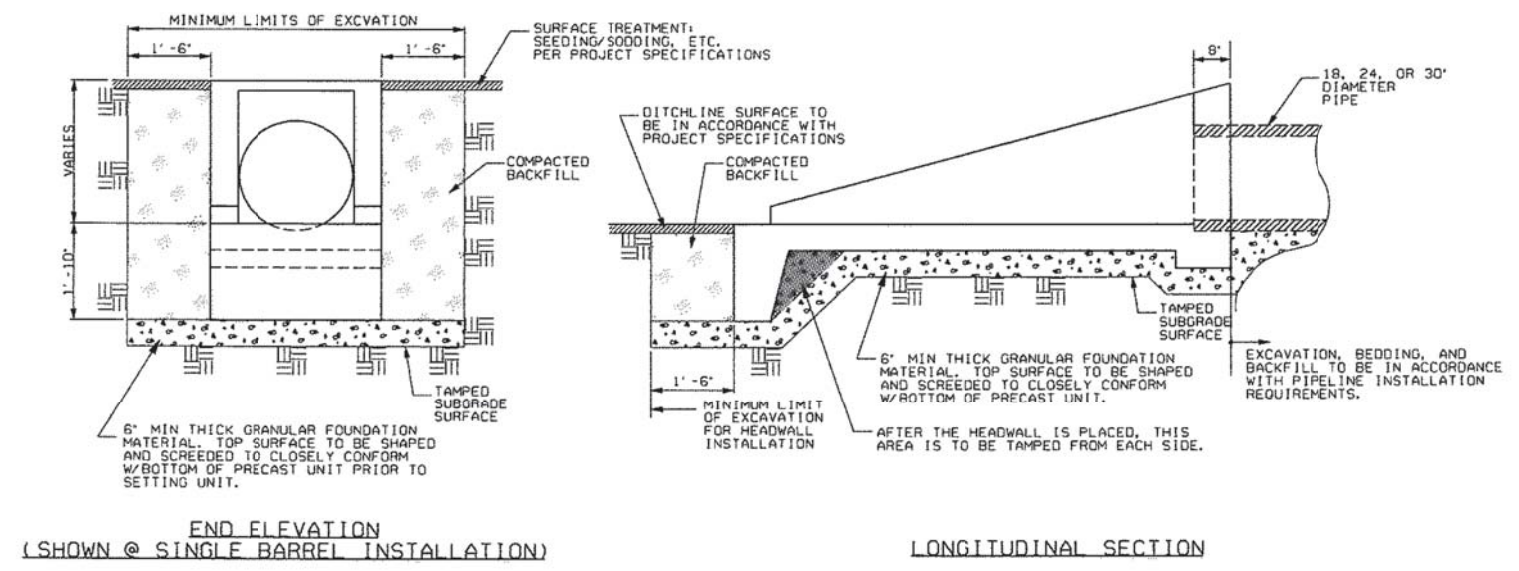
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818 N. McKenzie Street Foley, AL 36635

Phone: (251) 544-7900
Phone: (251) 970-7900

ALDOT STATE STD. DRAWING
ART CENTER SITE IMPROVEMENTS
CITY OF ORANGE BEACH

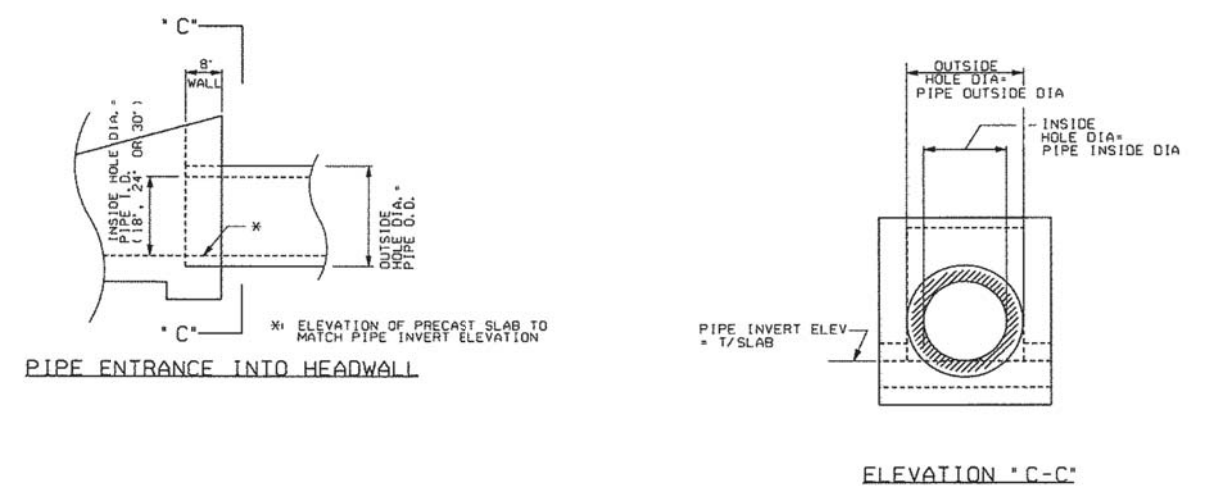
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NOTE: FOR SPECIFIC INSTALLATION PROCEDURES, CONTACT THE PRECAST END SECTION VENDOR.

INSTALLATION DETAILS



PIPE ENTRANCE DETAILS

--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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<p>REVISIONS</p> <p>1. Removed GROUT between Precast Unit and Pipe and related info on the PIPE ENTRANCE DETAILS and related Drawing Description "GROUT BETWEEN PRECAST UNIT AND PIPE" and APPROVED NON-SHOWN (SHEETS) GROUT on PIPE ENTRANCE INTO HEADWALL and changed Pipe Insertion into Headwall from 4" to 8" on LONGITUDINAL SECTION and PIPE ENTRANCE INTO HEADWALL on 05-09-11 by J.F.T.</p> <p>Drawn By: L.Y.S. DATE DRAWN: 05.11. DATE DRAWN: 05.11.2008</p>	<p>ALABAMA DEPARTMENT OF TRANSPORTATION 1409 COLLESIUM BOULEVARD MONTGOMERY, AL 36130-3050</p> <p>DESIGN BUREAU SPECIAL DRAWING</p> <p>PRECAST SLOPE PAVED HEADWALL DETAILS FOR RCP AND CMP ROADWAY PIPE</p>
<p>SPECIAL DRAWING NO HW-614-B (PC) (SHEET 2 OF 2)</p>	<p>INDEX NO 412</p>

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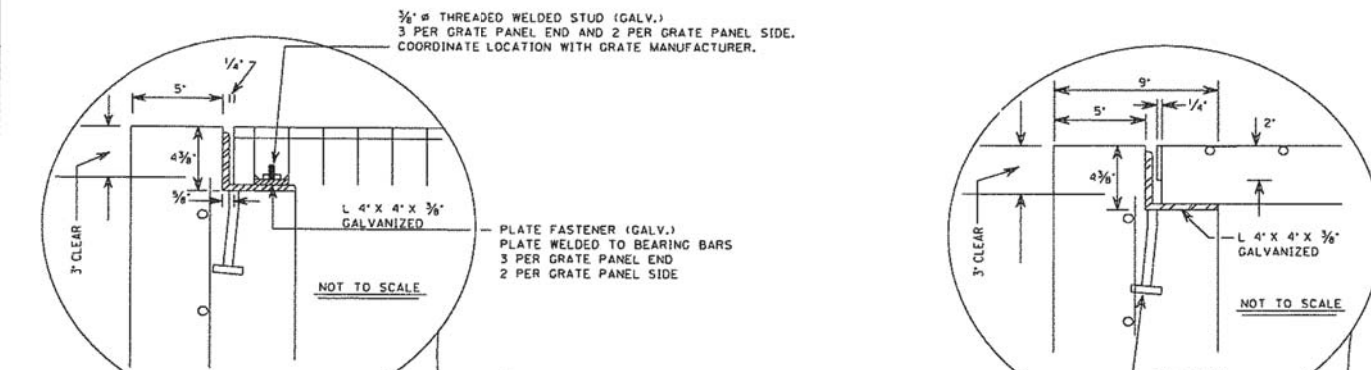
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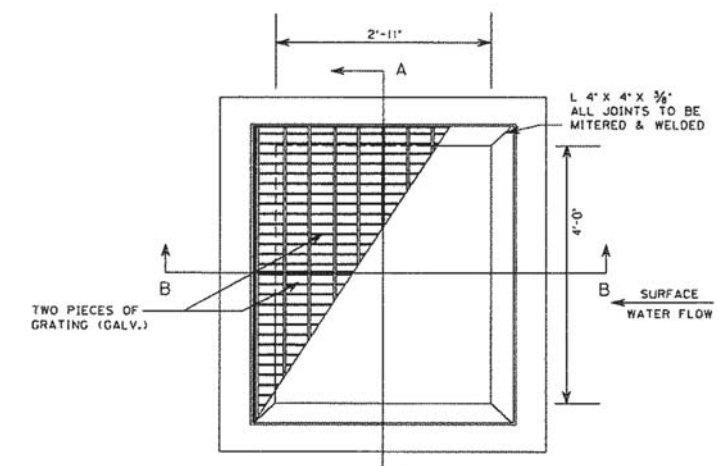
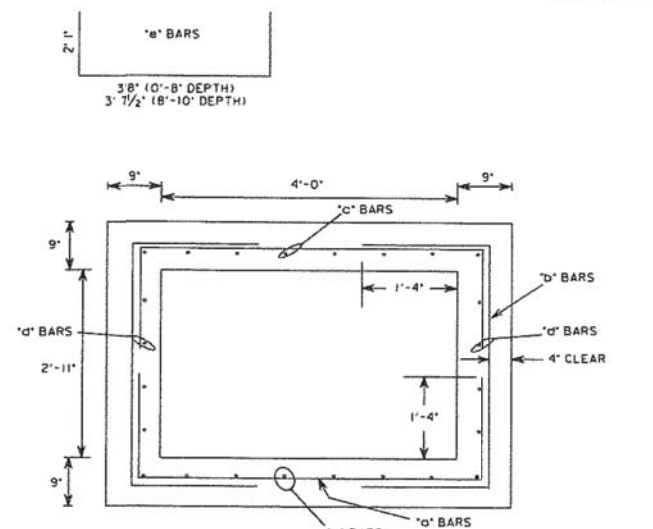
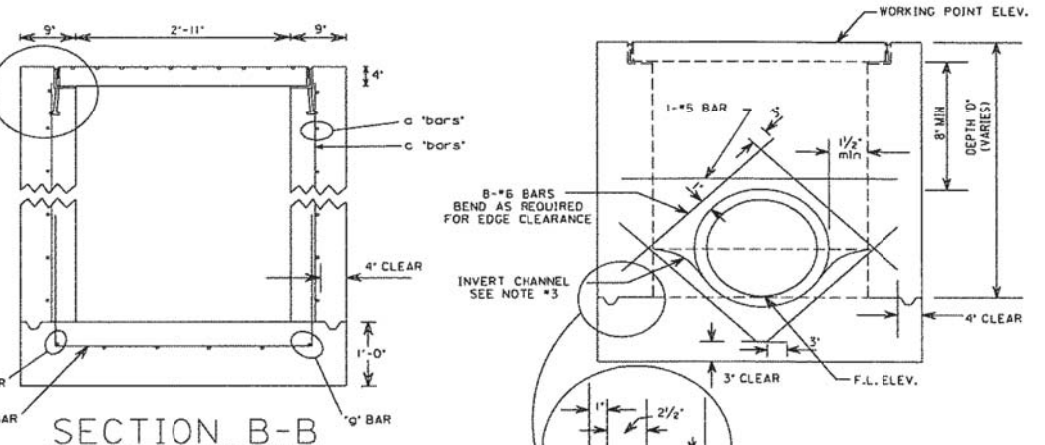
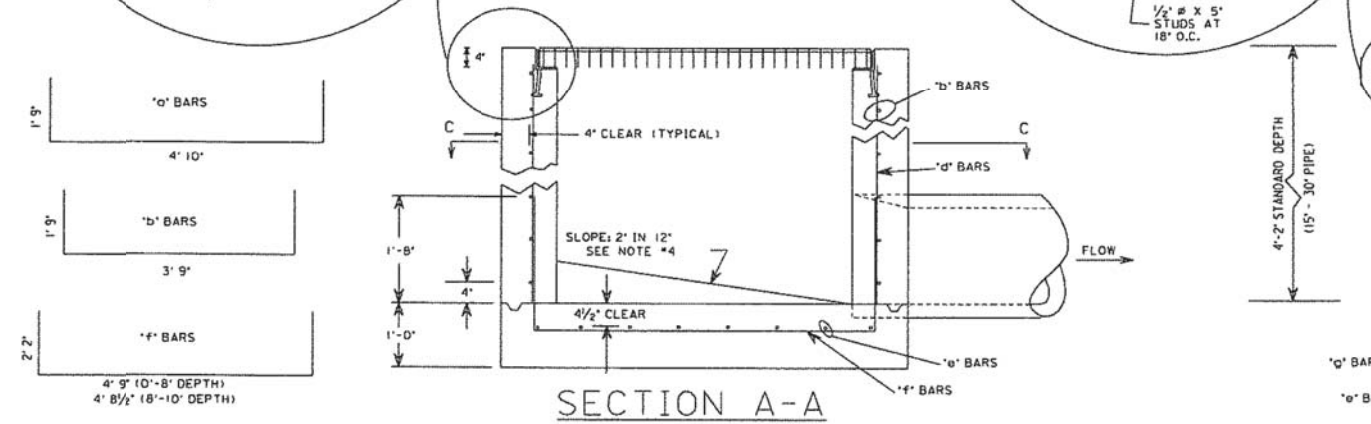
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DEPTH 'D'	a BARS + b BARS size spacing	c BARS STRAIGHT * size spacing	d BARS STRAIGHT * size spacing	e BARS * size spacing	f BARS * size spacing	g BARS STRAIGHT * size
0' - 8'	*4 @ 8"	16 *4 @ 8"	8 *4 @ 8.5"	8 *5 @ 8"	4 *5 @ 8.5"	2 *5
8' - 10'	*6 @ 8"	16 *6 @ 8"	8 *6 @ 8.5"	8 *5 @ 8"	4 *5 @ 8.5"	2 *5



- GENERAL NOTES**
- GRATE SPECIFICATION
STEEL GRATING TO BE STYLE HW (HEAVY WELD) TYPE P18A AS MANUFACTURED BY IKG INDUSTRIES OR AN APPROVED EQUAL. THE GRATING MATERIAL SHALL CONFORM TO ASTM A36 STEEL SPECIFICATION FOR THE MAIN BEARING BARS. MAIN BARS TO BE 4" DEEP BY 1/4" THICK, SPACED AT 1 1/2" CENTERS. THE CROSS BARS SHALL BE WELDED AT EACH INTERSECTION OF THE MAIN BEARING BARS AND CROSS BARS USING 3/8" DIAMETER CROSS BARS, SPACED 4 INCHES ON CENTER. CROSS BARS SHALL BE BE FLUSH WITH THE TOP OF THE GRATING. GRATING SHALL SPAN 36 INCHES MAXIMUM SPAN AND SATISFY THE AASHTO LOADING FOR H-20/HS-20. THE GRATES, GRATE SEATS, NUTS, BOLTS, AND MISCELLANEOUS METAL HARDWARE SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. GRATE AND SEAT SHALL BE A SUBSIDIARY OBLIGATION OF ITEM NUMBER 621-C INLET, TYPE "PD".
 - ALL SPLICE LENGTHS 36 BAR DIAMETERS MINIMUM.
 - INVERT CHANNELS ARE REQUIRED IN BASE WHERE PIPE FLOW PASSES THROUGH THE BOX. CHANNELS MAYBE FORMED IN CONCRETE OR CONSTRUCTED LATER USING A CEMENT CONCRETE MORTAR. CHANGES IN DIRECTION OF FLOW SHALL HAVE A TRUE CURVE OF AS LARGE A RADIUS AS SIZE WILL PERMIT AND BE FINISHED UP TO CENTER OF PIPE.
 - WHERE PIPE BEGINS AT PIPE BOX, SLOPE BOTTOM 2' PER 12' TOWARDS PIPE. BOTTOM MAYBE FORMED IN CONCRETE OR CONSTRUCTED LATER USING A CEMENT CONCRETE MORTAR.
 - THIS INLET IS NOT FOR USE ON PAVEMENT OR WHERE IT CAN BE SUBJECT TO TRAFFIC LOADS.
 - WHERE PIPE SHELL THICKNESS INTERFERE WITH BASE SLAB REINFORCING AND BEND REINFORCING DOWN UNDER PIPE.

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REVISIONS
1. Updates completed on 08-11-15 by D.R. and J.F.T.

ALABAMA DEPARTMENT OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

DETAIL OF BICYCLE SAFE DITCH INLET TYPE - PD

Bureau Std Engr: L.V.S.
DRAWN BY: DATE DRAWN:

SPECIAL DRAWING NO. INDEX NO.
SPECIAL PROJECT DETAIL

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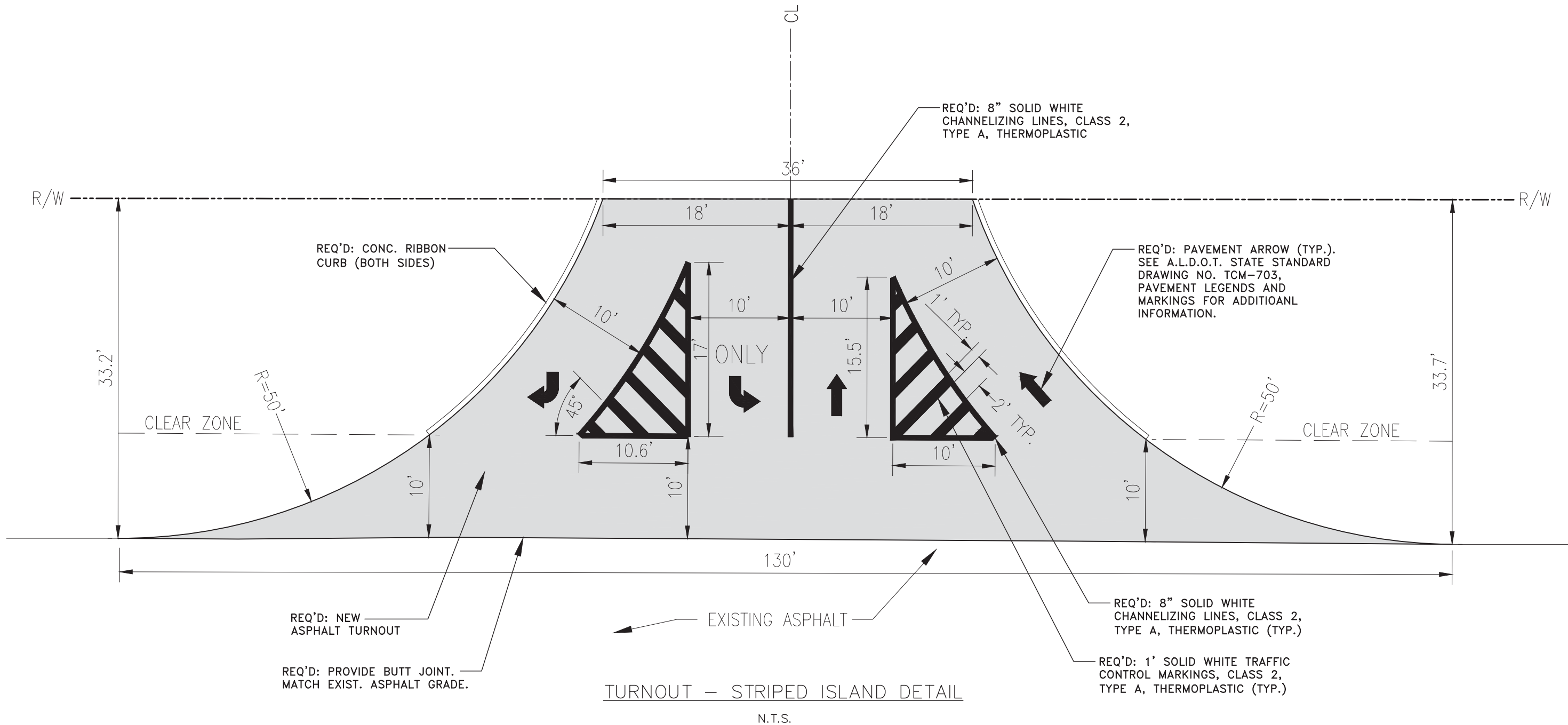
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ART CENTER SITE IMPROVEMENTS

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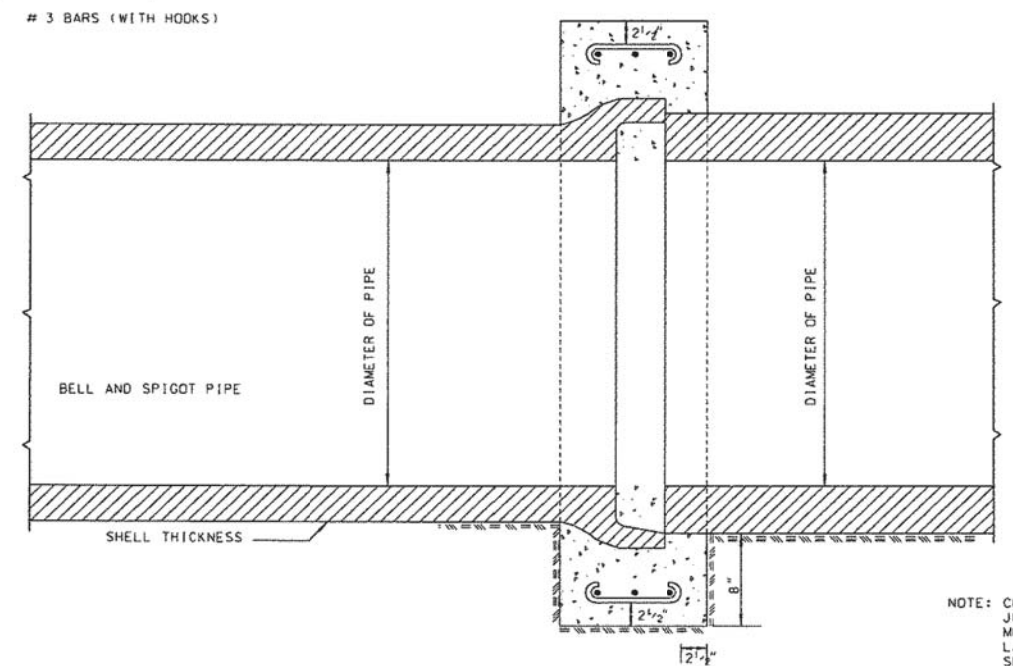
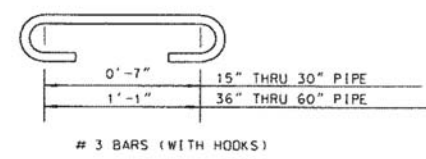
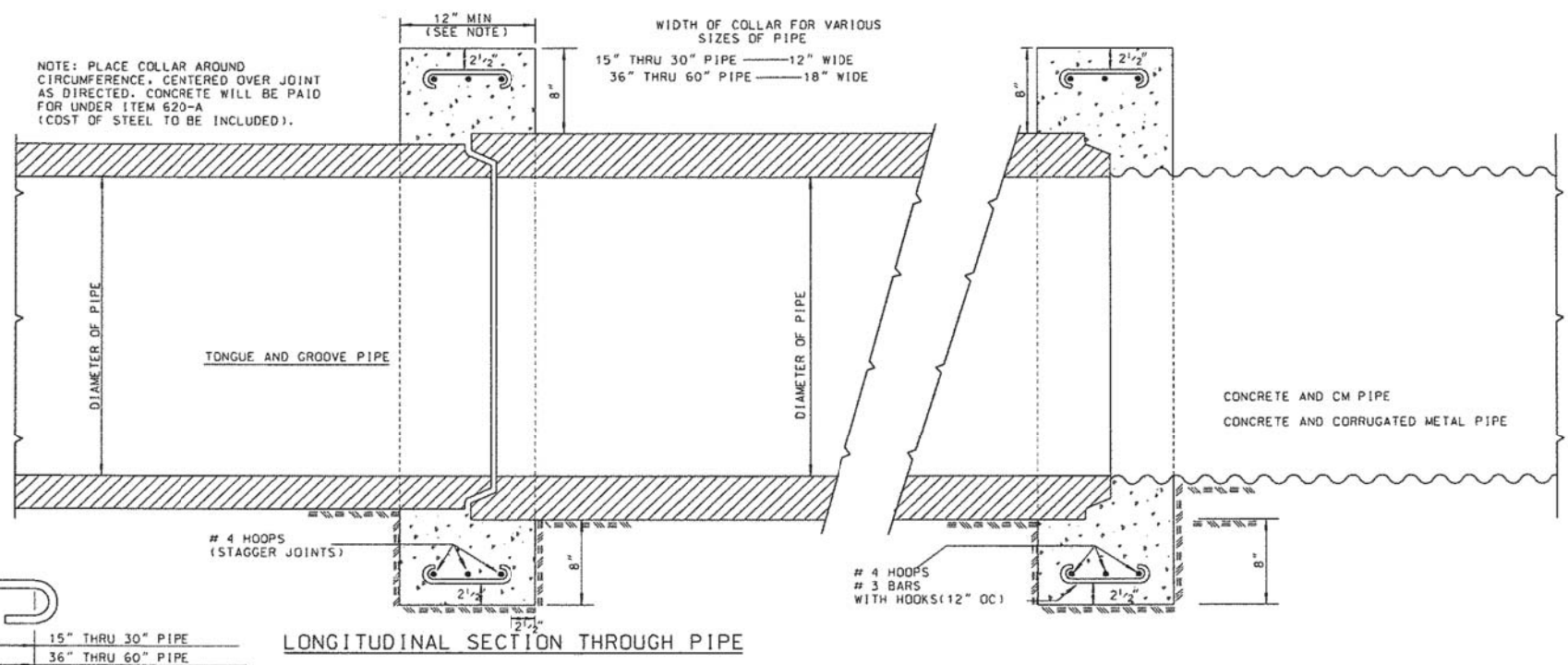
TURNOUT - STRIPED ISLAND DETAIL

ART CENTER SITE IMPROVEMENTS

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NOTE: CONCRETE COLLARS SHALL BE USED FOR THE FOLLOWING JOINT TYPES: BELL AND SPIGOT, TONGUE AND GROOVE, MODIFIED TONGUE AND GROOVE. LARGE VOIDS CAUSED BY IMPROPER FIT OF THE TWO (2) PIPE SECTIONS SHALL BE FILLED WITH CEMENT MORTAR.

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REVISIONS
 1. Added to CADD on 05-13-99 by J.F.T.

ALABAMA DEPARTMENT OF TRANSPORTATION
 1409 COLISEUM BOULEVARD
 MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING
 DETAILS OF CONCRETE COLLAR FOR CONNECTING CONCRETE PIPE OF DIFFERENT SHELL THICKNESS OR CONNECTING CONCRETE TO CORRUGATED METAL PIPE

DRAWN BY: _____
 DATE DRAWN: 02-12-76

SPECIAL DRAWING NO
 CC-530

INDEX NO
 401

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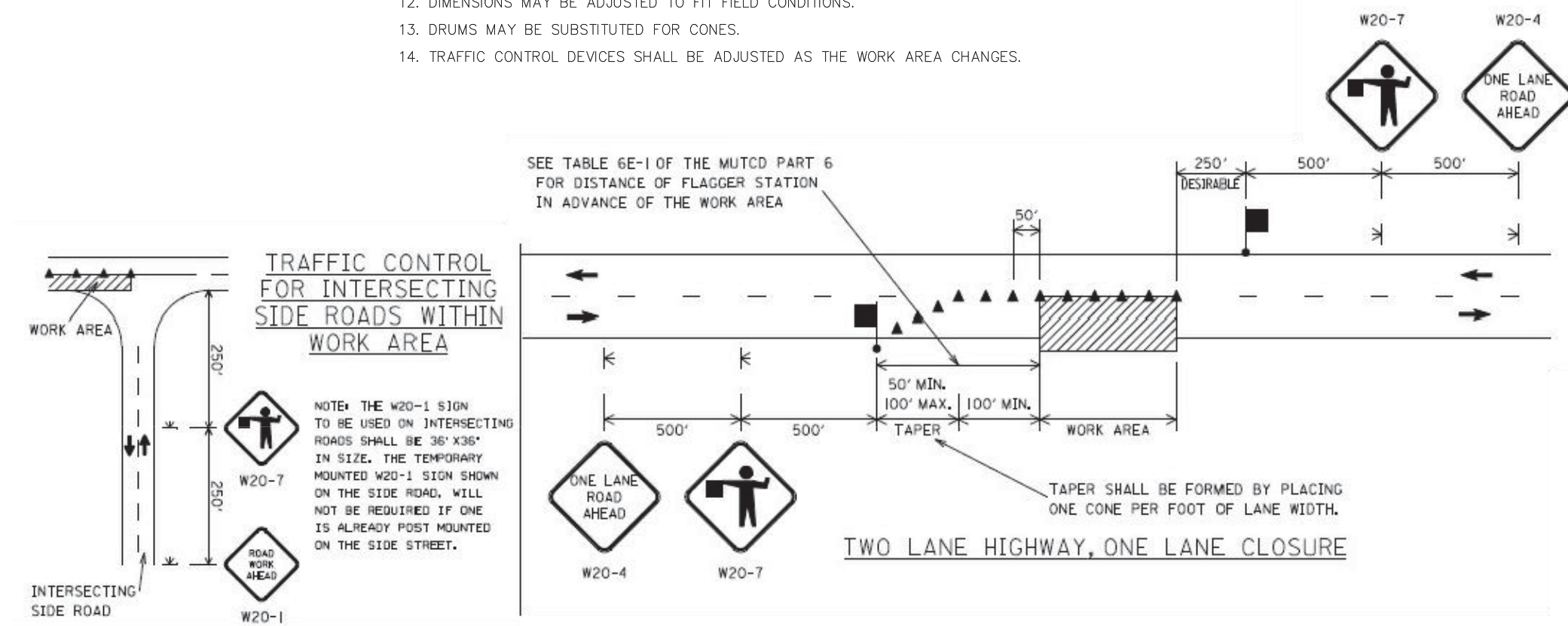
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TRAFFIC CONTROL DEVICES:

1. TRAFFIC CONTROL DEVICES SHOWN ARE CONSIDERED TO BE THE MINIMUM REQUIRED. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ADDITIONAL TRAFFIC CONTROL DEVICES OTHER THAN THOSE SHOWN WHEN ROADWAY & TRAFFIC CONDITIONS WARRANT.
2. FLAGGERS SHALL BE IN THE SIGHT OF EACH OTHER OR HAVE DIRECT COMMUNICATIONS AT ALL TIMES. FLAGGER STATION LOCATIONS MAY BE VARIED FROM THOSE SHOWN. FLAGGERS SHALL WEAR FLUORESCENT ORANGE VEST & HATS AT ALL TIMES.
3. ALL TRAFFIC CONTROL DEVICES SHALL BE REMOVED AT THE COMPLETION OF THE WORK WHEN THE WORK AREA IS OPEN TO TRAFFIC.
4. ALL TRAFFIC CONTROL DEVICES THAT ARE NOT APPLICABLE AT ANY SPECIFIC TIME SHALL BE COVERED OR REMOVED.
5. ALL VEHICLES, EQUIPMENT & WORKERS (EXCLUDING FLAGGERS) AND THEIR ACTIVITIES SHOULD BE RESTRICTED TO ONE SIDE OF THE ROADWAY.
6. ALL PERMANENT SIGNS SHALL BE POST MOUNTED.
7. ANY OBSTACLES OR HAZARDS WITHIN THE WORK AREA SHALL BE MARKED IN ACCORDANCE WITH MUTCD PART VI.
8. PARKED VEHICLES SHALL NOT BLOCK THE LINE OF SIGHT TO NORMAL SIGNS LOCATIONS.
9. THE SPACING BETWEEN CHANNELIZING DEVICES IN A WORK AREA SHALL BE 40' MAXIMUM.
10. WARNING LIGHTS SHOULD BE USED TO MARK CHANNELIZING DEVICES AT NIGHT AS NEEDED.
11. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
12. DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
13. DRUMS MAY BE SUBSTITUTED FOR CONES.
14. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED AS THE WORK AREA CHANGES.



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TRAFFIC CONTROL PLAN
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