

# CONSTRUCTION DRAWINGS FOR TAMINA ROAD AT DAVID MEMORIAL DRIVE INTERSECTION IMPROVEMENTS SHENANDOAH, TEXAS

BLEYL & ASSOCIATES PROJECT NUMBER: 10934



VICINITY MAP

PROJECT LOCATION MAP



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6	STORM SEWER PLAN AND PROFILE SOUTH DAVID MEMORIAL DRIVE CROSSING STA 0+00 TO STA 1+33
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CONTRACTOR SHALL PROVIDE EROSION CONTROL AS REQUIRED. CONTRACTOR WILL SUBMIT A SKETCH OF THE EROSION CONTROL METHOD TO BE USED TO THE ENGINEER FOR APPROVAL. THE ENGINEER SHALL DICTATE THE REQUIRED TYPE AND AMOUNT OF EROSION CONTROL TO PROTECT ALL SURROUNDING AREAS BASED ON THE CONSTRUCTION OPERATION BEING PERFORMED.

In accordance with SECTION 00 72 43 - General Conditions, SECTION 00 73 00 - Supplementary Conditions, and SECTION 01 32 16 - Construction Progress Schedule; submit a sequence of construction to the ENGINEER for approval prior to the issuance of the Notice To Proceed. The subsequent construction schedule shall be based on the same sequence.

Calendar Days for this project: 45

**CITY OF SHENANDOAH**

- |  |   |
|--|---|
| Wes Stephens<br>Jason L. Frazer<br>Gary Henson<br>Ron Hyde<br>Darrell Frazier<br>Jean Teague<br>Greg Smith<br>Byron Bevers | Mayor<br>Mayor Pro-tem, Council Member, Position 5<br>Council Member, Position 1<br>Council Member, Position 2<br>Council Member, Position 3<br>Council Member, Position 4<br>City Administrator<br>Public Works Director |
|--|---|



PROJECT NUMBER  
**10934**

FILE NAME:  
10934-01 COVER.DWG

SHEET:

**01** OF **12**

**Bleyl & Associates**  
Project Engineering & Management  
1722 Broadmoor Dr, Suite 210  
Bryan, Texas 77802  
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Conroe, Texas 77301  
Phone: (936) 441-7833  
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Texas Board of Professional Engineers F-678

REV	DATE	BY	APP	COMMENT

PREPARED FOR: CITY OF SHENANDOAH, SHENANDOAH, TEXAS 77881  
 DRAWN BY: KSN, CR  
 DATE: APRIL 24, 2013  
 SCALE: AS SHOWN  
 PROJECT MANAGER: DAVID L. BEST, P.E.

F:\10934\10934-TAMINA-DAVID-MEMORIAL-DRIVE-INTERSECTION\CD-10934\10934-01 COVER\COVER SHEET 4/24/2013 1:27 PM CARL RUSHING

# SYMBOLS

# LEGEND

# ABBREVIATIONS

USED FOR	PROPOSED		EXISTING	
	PLAN VIEW	PROFILE VIEW	PLAN VIEW	PROFILE VIEW
STORM SEWER INLET (CURB TYPE)				
STORM SEWER MANHOLE				
SANITARY SEWER MANHOLE				
WATER TAPPING SLEEVE & VALVE				
WATER LINE GATE VALVE & BOX				
FIRE HYDRANT				
BLOW OFF VALVE & PLUG				
REDUCER				
SANITARY SEWER STACK				
SANITARY SEWER CLEANOUT				
SANITARY SEWER WYE				
UTILITY ENCASEMENT				
STREET LIGHTS				
DRAINAGE FLOW				
WATER WELL				
GROUND STORAGE TANK				
ELEVATED STORAGE TANK				
REPLACEMENT TREE				
SPECIMEN TREE				
NON-SPECIMEN TREE				
SHRUB				
STORM SEWER MANHOLE				
SANITARY SEWER MANHOLE				

STORM SEWER:	$\frac{34.5}{12.5}$	CUMULATIVE RUNOFF IN ACRES CUMULATIVE RUNOFF IN C.F.S.
INTERNAL DRAINAGE:	$\frac{34.5}{12.5}$	RUNOFF IN ACRES RUNOFF IN C.F.S.
INLETS:	$\frac{34.5}{12.5}$	RUNOFF IN ACRES RUNOFF IN C.F.S.

AE	ACCESS EASEMENT
ASPH	ASPHALT
BL	BUILDING LINE
CL	CENTERLINE
CONC	CONCRETE
DGFL	DEPRESSED GUTTER FLOW LINE
DIA	DIAMETER
DE	DRAINAGE EASEMENT
DWY	DRIVEWAY
EA	EACH
ESMT	EASEMENT
EP	EDGE OF PAVEMENT
EXIST	EXISTING
EXT	EXTENSION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FNDL	FOUND
FP	FLOODPLAIN
FW	FLOODWAY
GV	GATE VALVE
GV & B	GATE VALVE AND BOX
GFL	GUTTER FLOW LINE
GW or GUY	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
INT	INTERSECTION
I.P. or IP	IRON PIPE
I.R. or IR	IRON ROD
JB	JUNCTION BOX
JT	LEFT
LF	LINEAR FEET
MH	MANHOLE
MEP	MATCH EXISTING PAVEMENT
MAX	MAXIMUM
MIN	MINIMUM
M.C.D.R.	MONTGOMERY COUNTY DEED RECORDS
M.C.M.R.	MONTGOMERY COUNTY MAP RECORDS
R.P.R.M.C.	MONTGOMERY COUNTY OFFICIAL PUBLIC RECORDS OF REAL PROPERTY
NG	NATURAL GROUND
PVMT	PAVEMENT
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
PVI	POINT OF VERTICAL INTERSECTION
PVC	POLYVINYL CHLORIDE PIPE
PP	POWER POLE
PROP	PROPOSED
RED	REDUCER
RT	RIGHT
ROW	RIGHT OF WAY
SAN SWR	SANITARY SEWER
SHT	SHEET
SHLDR	SHOULDER
SNGL	SINGLE
SF	SQUARE FEET
STA	STATION
TEMP	TEMPORARY
TC	TOP OF CURB
TP	TOP OF GRADE
TP	TOP OF PAVEMENT
TRC	TOP OF RIBBON CURB
TW	TOP OF WALK/SIDEWALK
TPE	TREE PRESERVATION EASEMENT
TPZ	TREE PRESERVATION ZONE
TYP	TYPICAL
UE	UTILITY EASEMENT
WL	WATER LINE
WTR	SVC WATER SERVICE
WSE	WATER SURFACE ELEVATION

CONTRACTOR SHALL PROVIDE EROSION CONTROL AS REQUIRED. CONTRACTOR WILL SUBMIT A SKETCH OF THE EROSION CONTROL METHOD TO BE USED TO THE ENGINEER FOR APPROVAL. THE ENGINEER SHALL DICTATE THE REQUIRED TYPE AND AMOUNT OF EROSION CONTROL TO PROTECT ALL SURROUNDING AREAS BASED ON THE CONSTRUCTION OPERATION BEING PERFORMED.

**CAUTION!! BEFORE YOU DIG - CALL**

DIG TESS	(800) 344-8377
ENTERGY	(800) 368-3749
TXU COMMUNICATIONS	(800) 526-2699
LONE STAR NOTIFICATION CENTER	(800) 669-8344
RELANT ENERGY ENTEX	

LOCATION AND ELEVATION OF EXISTING UTILITIES SHOWN HEREIN ARE PROVIDED BY OTHERS. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AT ALL CROSSINGS AND CONNECTION POINTS PRIOR TO ANY WORK. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

ALL CONSTRUCTION SHALL BE DONE PER CITY OF SHENANDOAH STANDARD DETAILS & SPECIFICATIONS, LATEST REVISIONS.

### STANDARD NOTES:

- THE CONTRACTOR SHALL ADHERE TO ALL CITY OF SHENANDOAH STANDARD DETAILS AND SPECIFICATIONS FOR PROPOSED PAVING, DRAINAGE AND UTILITY IMPROVEMENTS.
- REVISIONS TO THESE ENGINEERING PLANS MUST BE AUTHORIZED BY BLEYL & ASSOCIATES PRIOR TO CONSTRUCTION. BLEYL & ASSOCIATES - (936) 441-7833
- THE CONTRACTOR SHALL:
  - NOTIFY BLEYL & ASSOCIATES AND CITY OF SHENANDOAH A MINIMUM OF 48 HRS PRIOR TO COMMENCEMENT OF WORK. (936) 441-7833 (BLEYL) AND (281) 298-5522 (CITY)
  - NOTIFY ALL APPROPRIATE UTILITY COMPANIES 48 HOURS PRIOR TO ANY EXCAVATION.
  - NOTIFY THE CITY AND ENGINEER OF ALL DESIRED FIELD CHANGES. THE ENGINEER'S APPROVAL IS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY AND SAFETY PROVISIONS REQUIRED TO PROTECT INDIVIDUALS, EQUIPMENT, MATERIALS AND WORKMANSHIP NECESSARY FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN SAFE AND WORKMANLIKE MANNER TO PREVENT INJURIES DURING AND AFTER WORKING HOURS UNTIL PROJECT COMPLETION.
- THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ANY APPARENT OR SPECIAL NEEDS TO COMPLETE THE SCOPE OF WORK INCLUDED IN THIS PROJECT. THESE MAY INCLUDE THE NEED FOR OWNER PROVIDED SERVICES SUCH AS WATER, STAFF AVAILABILITY, ETC.
- ACCURATE RECORDS SHOWING THE INSTALLED LOCATIONS OF ALL IMPROVEMENTS SHALL BE MAINTAINED DURING CONSTRUCTION AND PROVIDED TO THE ENGINEER AS PART OF THE PROJECT COMPLETION.
- THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN ACCESS DURING THE CONSTRUCTION PERIOD. SCHEDULING OF ACTIVITIES SHOULD EMPHASIZE ACCESSIBILITY TO THE PROJECT SITE. EXTENDED PERIODS OF RESTRICTED ACCESS MUST BE LIMITED.
- THE CONTRACTOR SHALL PROTECT EXISTING MONUMENTS, YARDS, PRIVATE UTILITIES, DRIVES, CURBS, MAIL BOXES, SIGNS, IMPROVEMENTS, CULVERTS, AND ALL OTHER OWNER'S FACILITIES FROM DAMAGE DURING CONSTRUCTION. DAMAGE DONE TO THESE ITEMS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL MOVE AND REPLACE SUCH MOVABLE ITEMS AS MAIL BOXES, TRAFFIC CONTROL BUSINESS SIGNS, AND STREET SIGNS AS NECESSARY FOR CONSTRUCTION. FENCES OR STRUCTURES WHICH REQUIRE DISMANTLING OR REMOVAL SHALL BE RECONSTRUCTED OR REPLACED TO EQUAL OR BETTER THAN ORIGINAL CONDITION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE MUD AND/OR DIRT DEPOSITED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY. ALL EQUIPMENT AND DEBRIS FROM CONSTRUCTION TO BE REMOVED FROM THE SITE AT END OF PROJECT.
- AFTER DISTURBED AREAS HAVE BEEN COMPLETED TO THE LINES, GRADES, AND CROSS-SECTIONS SHOWN ON THE PLANS, SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS TO ESTABLISH ADEQUATE VEGETATION COVERAGE TO PREVENT EROSION. IF NO PROVISION FOR PLANTING GRASS IS INCLUDED IN THE PLANS OR SPECIFICATIONS, THE MINIMUM REQUIREMENT FOR THIS ITEM WILL BE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR "SOODING OR SEEDING FOR EROSION CONTROL."
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PROTECTION OF CONSTRUCTION ACTIVITIES DURING THE CONTRACT PERIOD. THIS SHALL INCLUDE ANY EROSION CONTROL MEASURES AND RE-GRADING NECESSARY TO ACHIEVE THE LINES AND GRADES SET FORTH BY THESE PLANS.
- SIGNING, BARRICAADING AND LIGHTING FOR CONSTRUCTION WITHIN HIGHWAY RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND OTHER APPLICABLE STATE OR LOCAL STANDARDS. SIGNS, BARRICADES AND LIGHTS SHALL BE KEPT CLEAN, OPERATIONAL AND PROPERLY POSITIONED TO ASSURE PROPER SAFETY PRECAUTIONS.
- ALL TESTING PROCEDURES USED ON THIS PROJECT SHALL CONFORM TO THE TCEQ, AWWA, NSF OR OTHER APPLICABLE STANDARDS. THE TESTING EXPENSE SHALL BE BORNE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
- TEXAS LAW ARTICLE 14.36C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN 6 FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATION, TITLE 29, PART 1910.130 (1) AND PART 1926.440 (A) (15) REQUIRE A MINIMUM CLEARANCE OF 10 FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF YOU OR YOUR COMPANY MUST WORK NEAR OVERHEAD POWER LINES, CALL THE POWER COMPANY FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT YOUR EXPENSE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WITH FACILITIES IN THE PROJECT LOCATION NOT LESS THAN 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES IN THE RESPECTIVE WORK AREAS. ADEQUATE PROVISIONS FOR PROTECTING EXISTING FACILITIES SHOULD BE EMPLOYED.
- ALL UNDERGROUND UTILITY LINES, SIZES, AND MATERIAL TYPES SHOWN ON THE PLANS ARE FOR THE PURPOSE OF MAKING THE CONTRACTOR AWARE THAT THEY EXIST. NEITHER THE OWNER, NOR THE ENGINEER GUARANTEES THE ACCURACY THEREOF. ALSO, THE LOCATIONS OF SOME EXISTING UTILITY LINES ARE NOT KNOWN AND THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND MATERIAL TYPES OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE FINAL ALIGNMENT OF THE PROPOSED MAIN LINES ARE SUBJECT TO MODIFICATION PENDING THE ESTABLISHMENT OF EXISTING UTILITY LOCATIONS.
- THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL "POINTS OF CROSSING" TO DETERMINE IF CONFLICTS EXIST BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS.
- THE LATEST TCEQ REGULATIONS MUST BE FOLLOWED FOR CROSSINGS OF SANITARY SEWER MAINS AND WATER MAINS. IT IS THE INTENT THAT THE MOST ECONOMICALLY ACCEPTABLE ALTERNATIVE BE ELECTED. ACCORDINGLY, FIELD VERIFICATION OF EXISTING UTILITY GRADES IS IMPERATIVE.
- FINAL COVER OF INSTALLED LINES SHALL NOT BEGIN PRIOR TO OBSERVATION AND ACCEPTANCE BY THE OWNER OR ENGINEER. THE CONTRACTOR SHALL CONTACT THE OWNER BY 4:00 P.M. REGARDING THE SCHEDULING OF THESE MONITORING VISITS.
- CONNECTIONS TO EXISTING LINES SHALL INCLUDE ALL REQUIRED FITTINGS AND MATERIALS REQUIRED TO MAKE A SUCCESSFUL TIE IN MEETING ALL APPLICABLE STANDARDS.
- THE LOADING AND UNLOADING OF ALL MATERIALS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL AT ALL TIMES BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS FOR MATERIALS AND EQUIPMENT.
- ALL MATERIALS AND EQUIPMENT SHALL BE BOTH FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.
- CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISIONS OF OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING TRENCHING AND SHORING. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUB-PART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989, AND LATEST REVISIONS.
- DETAILS PREPARED DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY CHAPTER 756, SUBCHAPTER "C" OF THE TEXAS HEALTH AND SAFETY CODE.
- CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, ALONG EXISTING ROADWAYS AND TRAFFIC AREAS
- ALL TRENCHES, INCLUDING TRENCHES FOR LEADS AND STUBS UNDER PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PAVEMENT SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND AS PER SPECIFICATION TO A POINT IMMEDIATELY BELOW THE SUBGRADE. TRENCHES OTHER THAN UNDER PAVEMENT SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL IN 6 INCH LAYERS AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM DESIGNATION D-698/AASHTO 199). MOISTURE CONTENT OF BACKFILL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CEMENT STABILIZED SAND SPECIFICATIONS. SEE DETAIL SHEETS FOR BEDDING AND OTHER DESIGN REQUIREMENTS.
- CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS, AND CONFIRM POINTS OF CONNECTIONS TO EXISTING IMPROVEMENTS, INCLUDING CONFIRMATION OF ELEVATIONS AND GRADES OF EXISTING FACILITIES AND UTILITIES PRIOR TO STARTING ANY GRADING, PAVING OR UTILITY INSTALLATION. VERIFICATION OF LOCATIONS AND FUNCTIONS OF EACH EXISTING STRUCTURE OR SYSTEM AND ALL EXISTING UTILITY GRADES AND INVERT ELEVATIONS IS THE CONTRACTOR'S RESPONSIBILITY. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. ANY CONFLICTS OR ERRORS BETWEEN EXISTING FIELD CONDITIONS AND ENGINEERING PLANS MUST BE RESOLVED PRIOR TO STARTING EXCAVATION OR SETTING ANY GRAVITY SEWER (STORM OR SANITARY) AND APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR COMPLETING CERTIFICATION FORM 006293 IN THE BID PACKAGE PRIOR TO START OF CONSTRUCTION.
- ALL UNSATISFACTORY AND/OR WASTE MATERIALS INCLUDING VEGETATION, ROOTS, CONCRETE AND DEBRIS SHALL BE HAULED OFF-SITE BY THE CONTRACTOR. INCLUDE COST OF THIS WORK, INCLUDING HAUL, IN OTHER ITEMS OF THIS PROJECT. CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION OF PROPOSED FACILITIES.
- CONTRACTOR SHALL CONFINED ALL WORK EFFORTS WITHIN THE DESIGNATED RIGHT-OF-WAY OR EASEMENTS UNLESS SPECIFICALLY AUTHORIZED BY THE OWNER. EXTREME CARE SHOULD BE EXERCISED WITHIN ADJACENT PROPERTY TO PROTECT THE EXISTING TREES AND FENCES.

REV	DATE	BY	APP	COMMENT
1				
2				
3				
4				
5				

PREPARED FOR: CITY OF SHENANDOAH  
 DRAWN BY: KACOR  
 SCALE: AS SHOWN  
 DATE: APR 24, 2013  
 PROJECT MANAGER: DAVID L. BENY P.E.  
 SHENANDOAH, TEXAS 77881  
 2885 LAFAYETTE  
 FAX: (817) 387-2225

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 Project Engineering & Management

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 Fax: (979) 268-3849

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 Phone: (936) 441-7833  
 Fax: (936) 468-3839

Texas Board of Professional Engineers F-678

**STANDARD LEGEND AND SYMBOLS SHEET**

TAMINA ROAD AT  
 DAVID MEMORIAL DRIVE  
 INTERSECTION IMPROVEMENTS

CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS

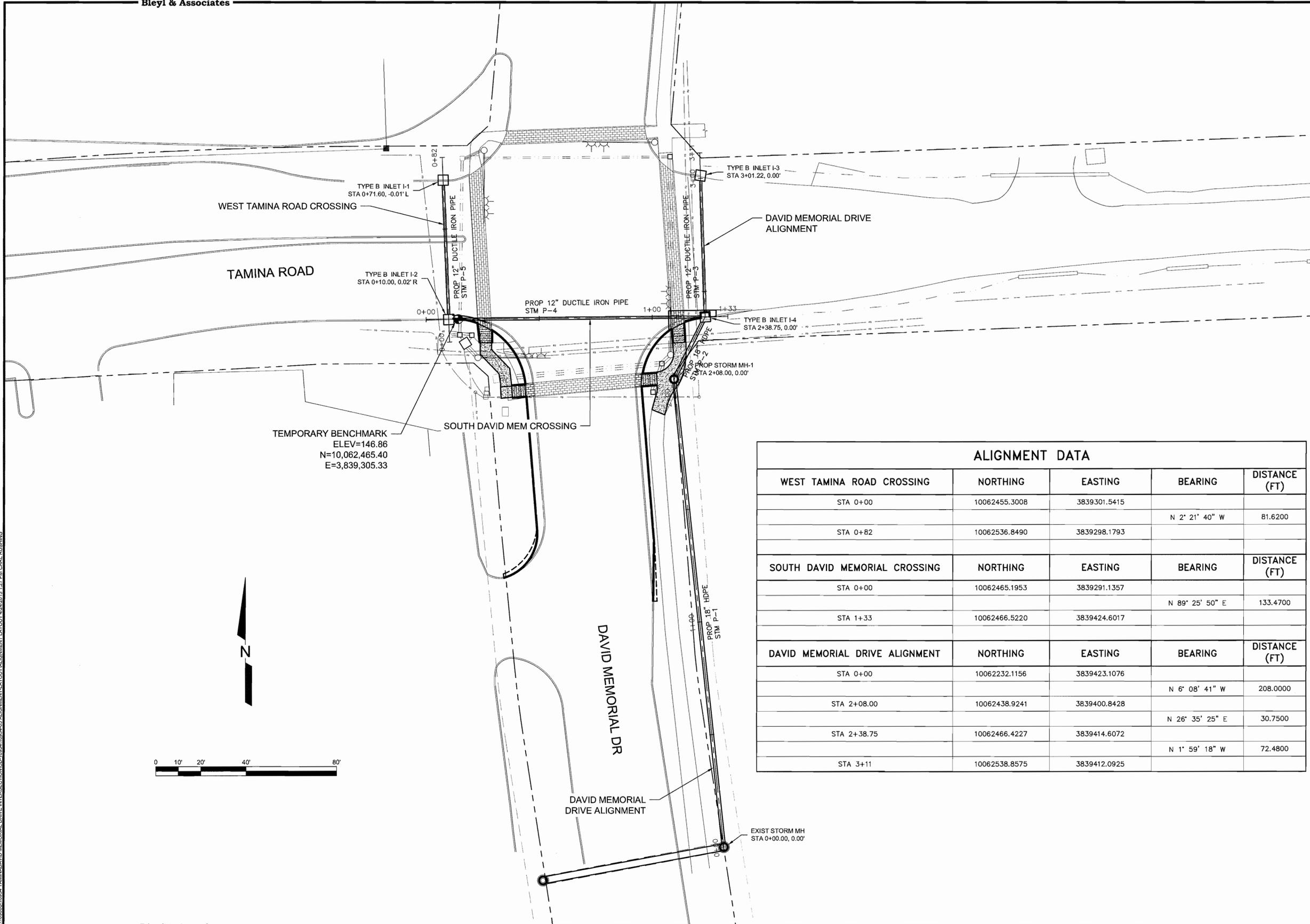
STATE OF TEXAS  
 DEREK WIND  
 98212  
 LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER  
**10934**

FILE NAME:  
 10934-02 STD NOTES DWS

SHEET:  
**02** OF **12**

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TEMPORARY BENCHMARK  
 ELEV=146.86  
 N=10,062,465.40  
 E=3,839,305.33

ALIGNMENT DATA				
<b>WEST TAMINA ROAD CROSSING</b>	<b>NORTHING</b>	<b>EASTING</b>	<b>BEARING</b>	<b>DISTANCE (FT)</b>
STA 0+00	10062455.3008	3839301.5415		
STA 0+82	10062536.8490	3839298.1793	N 2° 21' 40" W	81.6200
<b>SOUTH DAVID MEMORIAL CROSSING</b>	<b>NORTHING</b>	<b>EASTING</b>	<b>BEARING</b>	<b>DISTANCE (FT)</b>
STA 0+00	10062465.1953	3839291.1357		
STA 1+33	10062466.5220	3839424.6017	N 89° 25' 50" E	133.4700
<b>DAVID MEMORIAL DRIVE ALIGNMENT</b>	<b>NORTHING</b>	<b>EASTING</b>	<b>BEARING</b>	<b>DISTANCE (FT)</b>
STA 0+00	10062232.1156	3839423.1076		
STA 2+08.00	10062438.9241	3839400.8428	N 6° 08' 41" W	208.0000
STA 2+38.75	10062466.4227	3839414.6072	N 26° 35' 25" E	30.7500
STA 3+11	10062538.8575	3839412.0925	N 1° 59' 18" W	72.4800

REV	DATE	BY	APP	COMMENT
1				
2				
3				
4				

PREPARED FOR: CITY OF SHENANDOAH  
 2996 S. I-40 N.W., TEXAS 73401  
 TEL: (254) 268-5432  
 FAX: (254) 268-2225  
 PROJECT MANAGER: DAVID L. BRESLY, P.E.

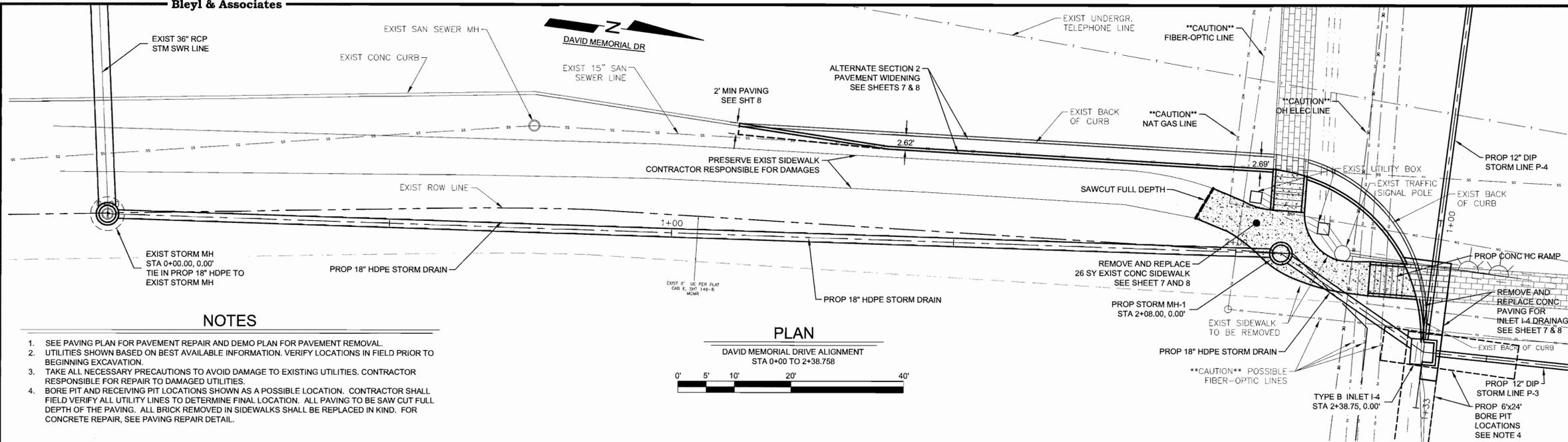
**Bleyl & Associates**  
 Project Engineering & Management  
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 Bryan, Texas 77802 Phone: (936) 441-7833  
 P.O. Box 1055 Fax: (936) 760-3833  
 Fax: (979) 260-3849  
 Texas Board of Professional Engineers F-678

**ALIGNMENT LAYOUT**  
 TAMINA ROAD AT  
 DAVID MEMORIAL DRIVE  
 INTERSECTION IMPROVEMENTS  
 CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS



PROJECT NUMBER  
**10934**  
 FILE NAME:  
 10934-03 ALIGNMENT-LAYOUT.DWG  
 SHEET:  
**03 OF 12**

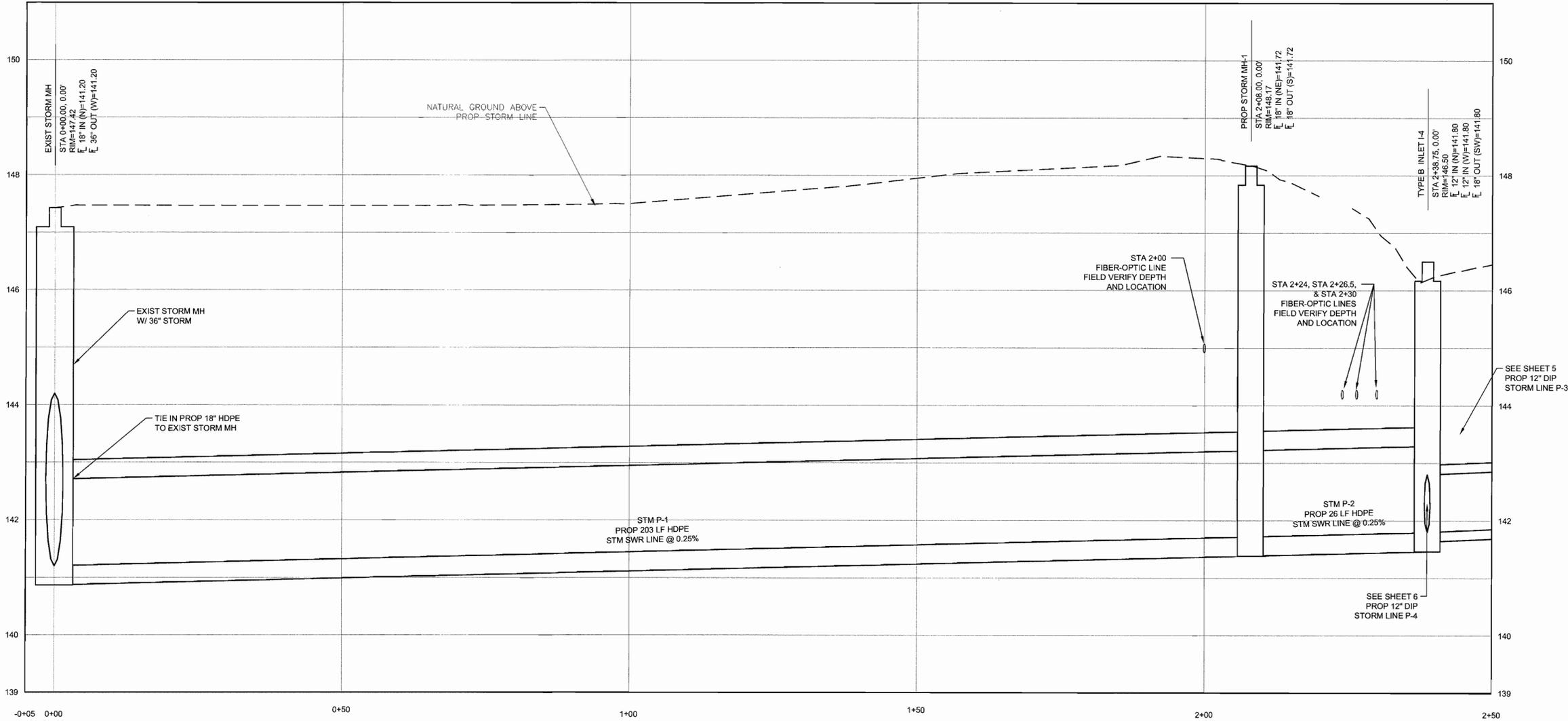
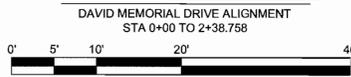
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**NOTES**

1. SEE PAVING PLAN FOR PAVEMENT REPAIR AND DEMO PLAN FOR PAVEMENT REMOVAL.
2. UTILITIES SHOWN BASED ON BEST AVAILABLE INFORMATION. VERIFY LOCATIONS IN FIELD PRIOR TO BEGINNING EXCAVATION.
3. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES. CONTRACTOR RESPONSIBLE FOR REPAIR TO DAMAGED UTILITIES.
4. BORE PIT AND RECEIVING PIT LOCATIONS SHOWN AS A POSSIBLE LOCATION. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LINES TO DETERMINE FINAL LOCATION. ALL PAVING TO BE SAW CUT FULL DEPTH OF THE PAVING. ALL BRICK REMOVED IN SIDEWALKS SHALL BE REPLACED IN KIND. FOR CONCRETE REPAIR, SEE PAVING REPAIR DETAIL.

**PLAN**



REV	DATE	BY	APP	COMMENT
1				
2				
3				

PREPARED FOR: CITY OF SHENANDOAH  
 28555 I-49 N  
 SHENANDOAH, TEXAS 77881  
 PHONE: (979) 266-3849  
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**Bleyl & Associates**  
 Project Engineering & Management  
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 Bryan, Texas 77802 Conroe, Texas 77301  
 Phone: (979) 266-1125 Phone: (936) 760-8833  
 Fax: (979) 266-3849 Fax: (936) 760-3833  
 Texas Board of Professional Engineers E-678

**STORM SEWER PLAN & PROFILE**  
 DAVID MEMORIAL DRIVE  
 STA 0+00 TO STA 2+38.75

**TAMINA ROAD AT**  
**DAVID MEMORIAL DRIVE**  
**INTERSECTION IMPROVEMENTS**

CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS

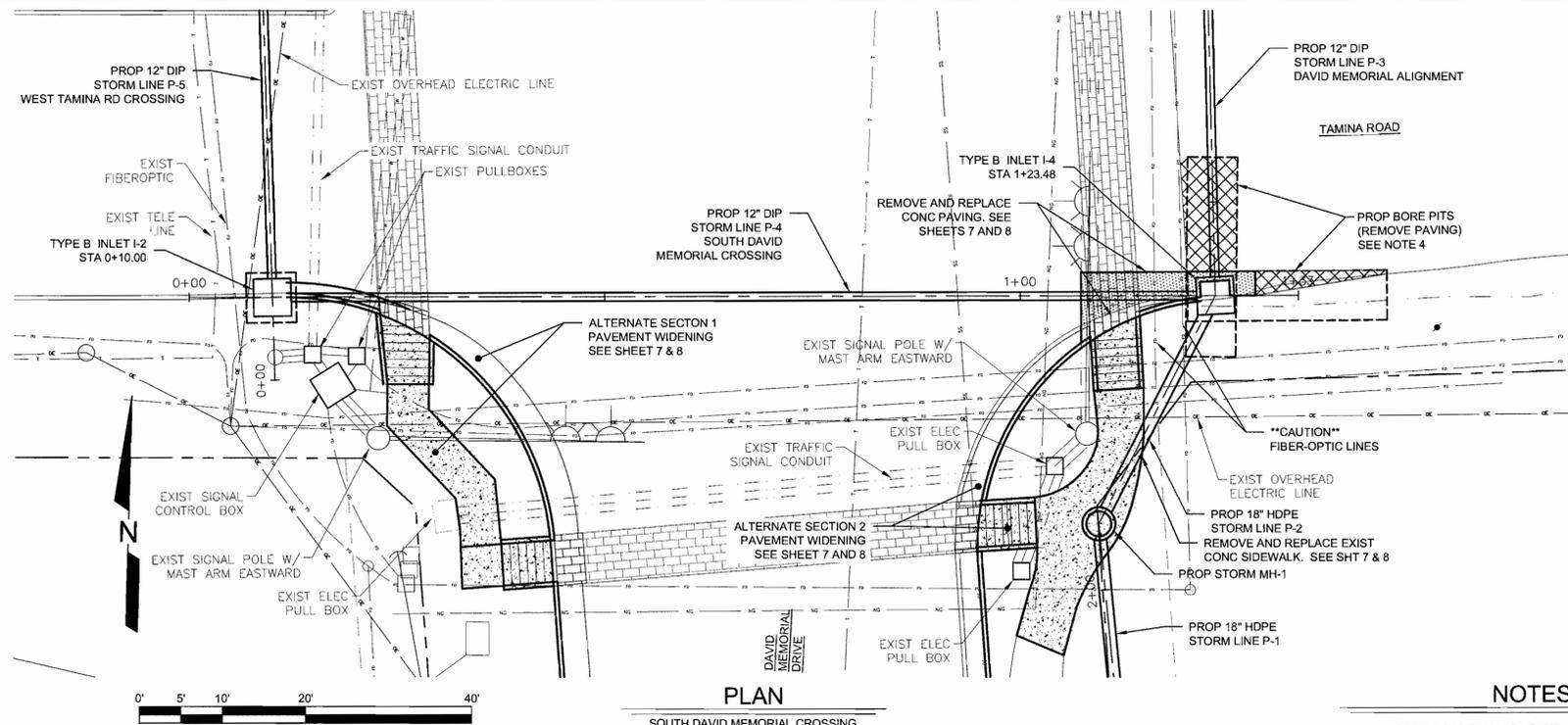


PROJECT NUMBER  
**10934**

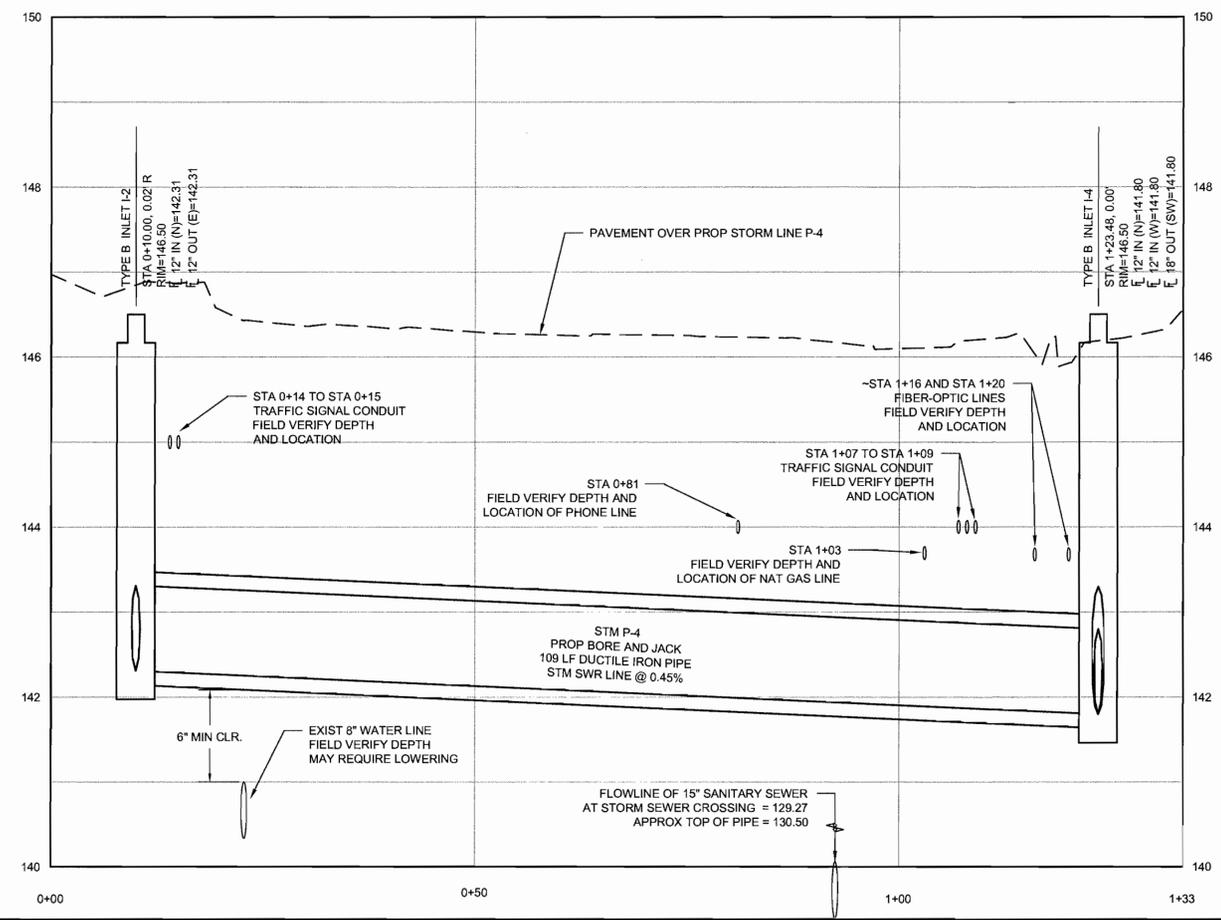
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 10934-04-UTIL-SD-DM.DWG

SHEET:  
**04** OF **12**





- NOTES**
- SEE PAVING PLAN FOR PAVEMENT REPAIR AND DEMO PLAN FOR PAVEMENT REMOVAL.
  - UTILITIES SHOWN BASED ON BEST AVAILABLE INFORMATION. VERIFY LOCATIONS IN FIELD PRIOR TO BEGINNING EXCAVATION.
  - TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES. CONTRACTOR RESPONSIBLE FOR REPAIR TO DAMAGED UTILITIES.
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REV	DATE	BY	APP	COMMENT
A				
B				
C				
D				

PREPARED FOR: CITY OF SHENANDOAH  
 28865 L42 N  
 TEL: (979) 266-4522  
 FAX: (979) 266-4522  
 DATE: April 24, 2013  
 DRAWN BY: KGN  
 PROJECT MANAGER: DAVID L. BSELY, P.E.

**Bleyl & Associates**  
Project Engineering & Management

1722 Broadmoor Dr., Suite 210  
Bryan, Texas 77802  
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Conroe, Texas 77301  
Phone: (832) 866-8833  
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Texas Board of Professional Engineers P-678

**B & A**

**STORM SEWER PLAN & PROFILE**  
SOUTH DAVID MEMORIAL CROSSING

TAMINA ROAD AT  
DAVID MEMORIAL DRIVE  
INTERSECTION IMPROVEMENTS

CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS

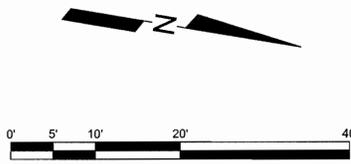
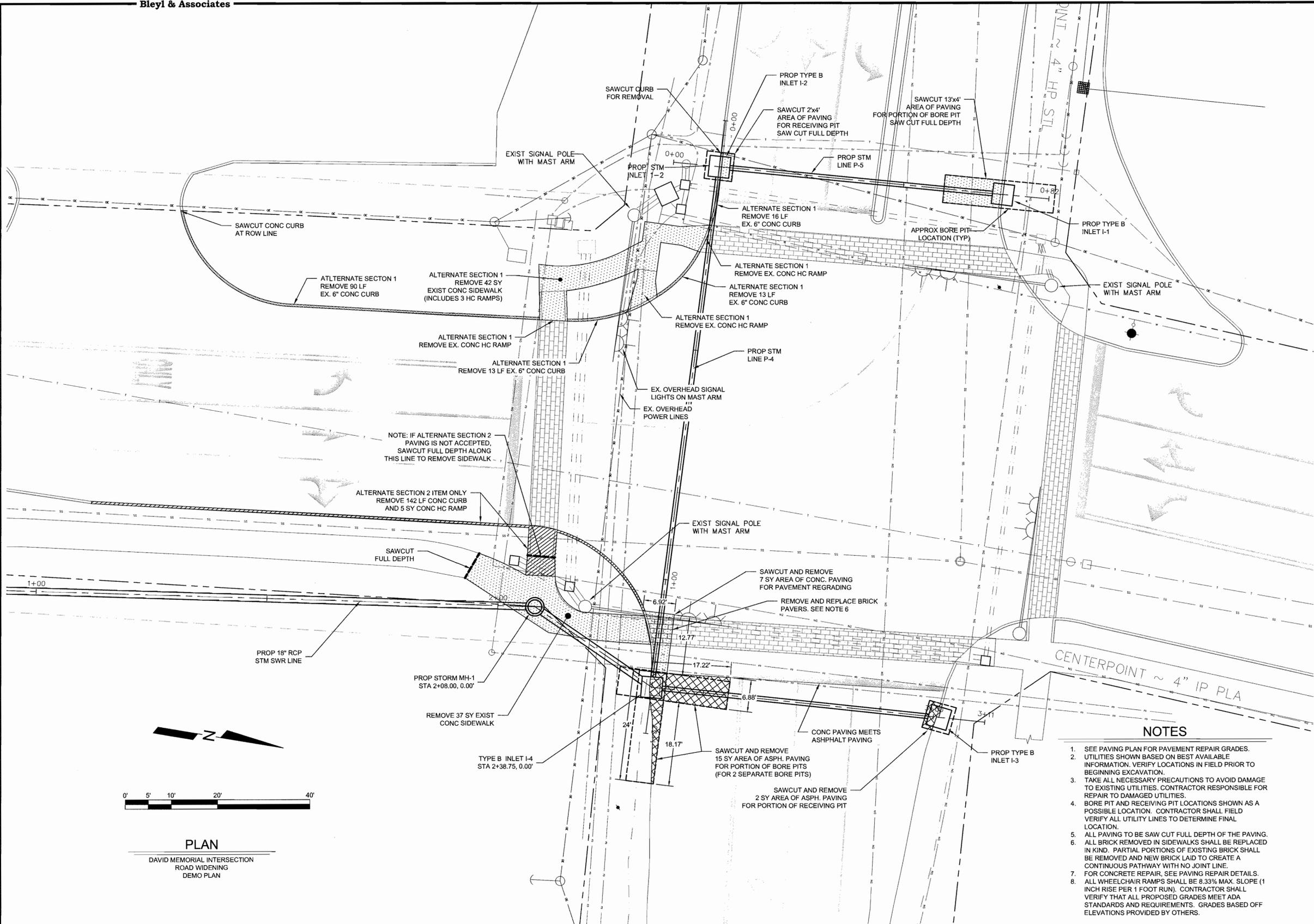


PROJECT NUMBER  
**10934**

FILE NAME:  
10934-08-UTIL-SD-DM-SOUTH.DWG

SHEET:  
**06** OF **12**

F:\10934\10934 TAMINA DAVID MEMORIAL DRIVE INTERSECTION\CD-10934\08-UTIL-SD-DM-SOUTH\STORM SEWER PLAN & PROFILE DAVID MEMORIAL SOUTH CROSSING.dwg 4/24/2013 1:51 PM CARL RUSHING



**PLAN**  
 DAVID MEMORIAL INTERSECTION  
 ROAD WIDENING  
 DEMO PLAN

**NOTES**

1. SEE PAVING PLAN FOR PAVEMENT REPAIR GRADES. UTILITIES SHOWN BASED ON BEST AVAILABLE INFORMATION. VERIFY LOCATIONS IN FIELD PRIOR TO BEGINNING EXCAVATION.
2. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES. CONTRACTOR RESPONSIBLE FOR REPAIR TO DAMAGED UTILITIES.
3. BORE PIT AND RECEIVING PIT LOCATIONS SHOWN AS A POSSIBLE LOCATION. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LINES TO DETERMINE FINAL LOCATION.
4. ALL PAVING TO BE SAW CUT FULL DEPTH OF THE PAVING. ALL BRICK REMOVED IN SIDEWALKS SHALL BE REPLACED IN KIND. PARTIAL PORTIONS OF EXISTING BRICK SHALL BE REMOVED AND NEW BRICK LAID TO CREATE A CONTINUOUS PATHWAY WITH NO JOINT LINE.
5. FOR CONCRETE REPAIR, SEE PAVING REPAIR DETAILS.
6. ALL WHEELCHAIR RAMPS SHALL BE 8.33% MAX. SLOPE (1 INCH RISE PER 1 FOOT RUN). CONTRACTOR SHALL VERIFY THAT ALL PROPOSED GRADES MEET ADA STANDARDS AND REQUIREMENTS. GRADES BASED OFF ELEVATIONS PROVIDED BY OTHERS.

REV	DATE	BY	APP	COMMENT
1				
2				
3				
4				

PREPARED FOR:  
 CITY OF SHENANDOAH  
 29951 HAS LN  
 TEL: (281) 268-5232  
 FAX: (281) 267-2229

SCALE: AS SHOWN  
 DATE: April 24, 2013  
 DRAWN BY: KGN  
 PROJECT MANAGER: DAVID L. BRESLY, P.E.

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Texas Board of Professional Engineers F.678

**B & A**

DAVID MEMORIAL DRIVE  
 DEMOLITION PLAN  
 FOR PAVING REMOVAL

TAMINA ROAD AT  
 DAVID MEMORIAL DRIVE  
 INTERSECTION IMPROVEMENTS

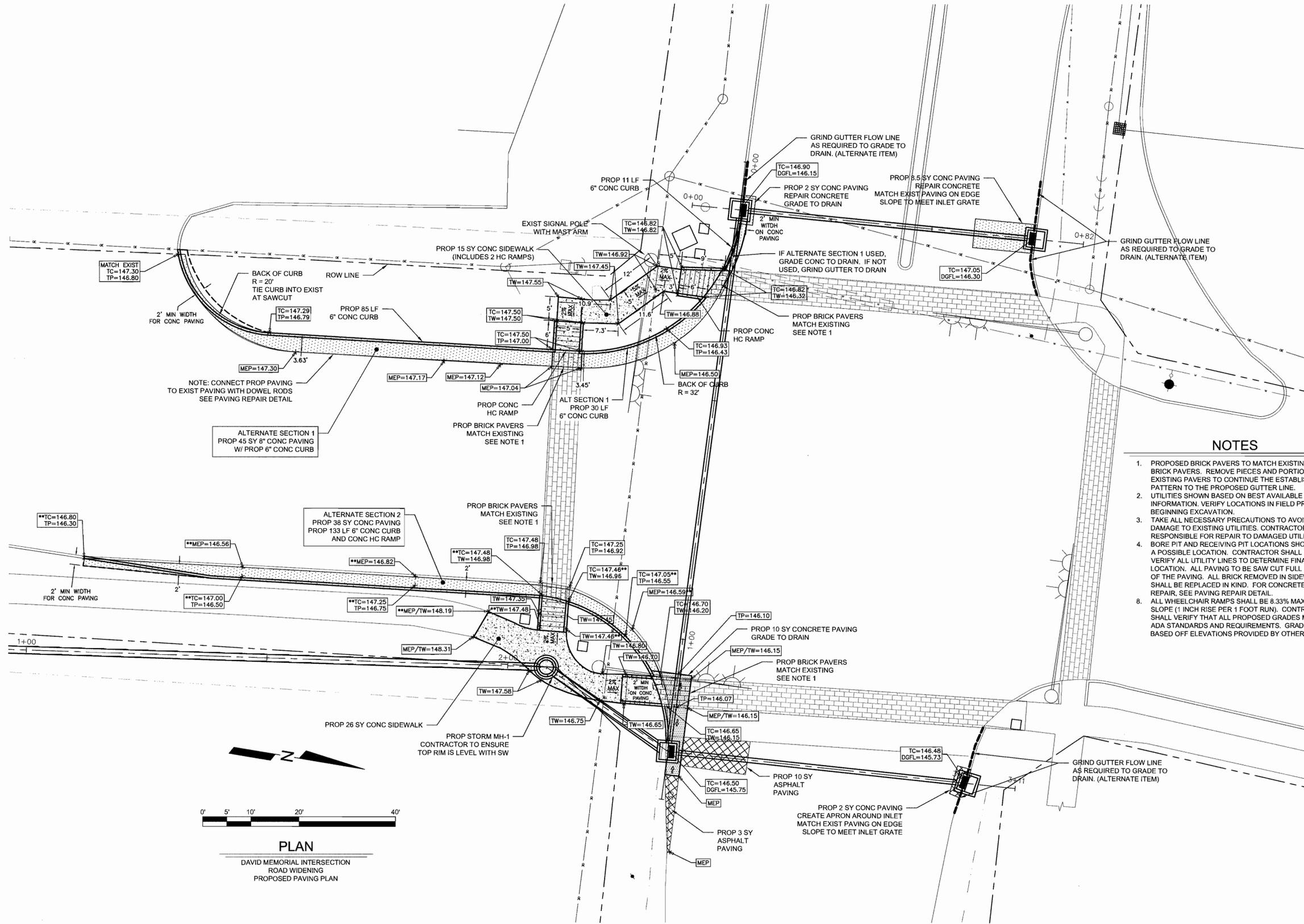
CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS



PROJECT NUMBER  
**10934**

FILE NAME:  
 10934-07-CONC DEMO.DWG

SHEET:  
**07** OF **12**



**NOTES**

1. PROPOSED BRICK PAVERS TO MATCH EXISTING BRICK PAVERS. REMOVE PIECES AND PORTIONS OF EXISTING PAVERS TO CONTINUE THE ESTABLISHED PATTERN TO THE PROPOSED GUTTER LINE.
2. UTILITIES SHOWN BASED ON BEST AVAILABLE INFORMATION. VERIFY LOCATIONS IN FIELD PRIOR TO BEGINNING EXCAVATION.
3. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES. CONTRACTOR RESPONSIBLE FOR REPAIR TO DAMAGED UTILITIES.
4. BORE PIT AND RECEIVING PIT LOCATIONS SHOWN AS A POSSIBLE LOCATION. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LINES TO DETERMINE FINAL LOCATION. ALL PAVING TO BE SAW CUT FULL DEPTH OF THE PAVING. ALL BRICK REMOVED IN SIDEWALKS SHALL BE REPLACED IN KIND. FOR CONCRETE REPAIR, SEE PAVING REPAIR DETAIL.
5. ALL WHEEL CHAIR RAMPS SHALL BE 8.33% MAX. SLOPE (1 INCH RISE PER 1 FOOT RUN). CONTRACTOR SHALL VERIFY THAT ALL PROPOSED GRADES MEET ADA STANDARDS AND REQUIREMENTS. GRADES BASED OFF ELEVATIONS PROVIDED BY OTHERS.

**PLAN**  
DAVID MEMORIAL INTERSECTION  
ROAD WIDENING  
PROPOSED PAVING PLAN

REV	DATE	BY	APP	COMMENT
1				
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3				
4				

PREPARED FOR:  
 CITY OF SHENANDOAH  
 28655 I-49 N  
 TEL: (281) 298-5522  
 DATE: APR 24, 2013  
 DRAWN BY: KGN  
 PROJECT MANAGER: DAVID L. BESLY, P.E.

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Fax: (979) 260-3849

Texas Board of Professional Engineers P-678

DAVID MEMORIAL DRIVE  
PAVING PLAN FOR  
PROP PAVEMENT WIDENING AND REPAIR

TAMINA ROAD AT  
DAVID MEMORIAL DRIVE  
INTERSECTION IMPROVEMENTS

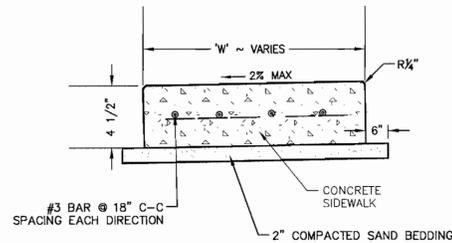
CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS



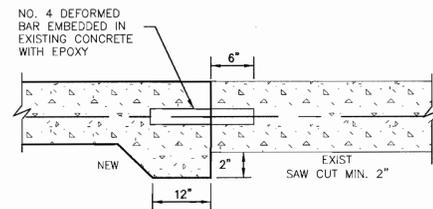
PROJECT NUMBER  
**10934**

FILE NAME:  
10934-08-PAVING PLAN.DWG

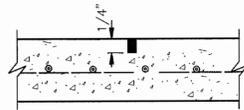
SHEET:  
**08** OF **12**



CONCRETE SIDEWALK DETAIL



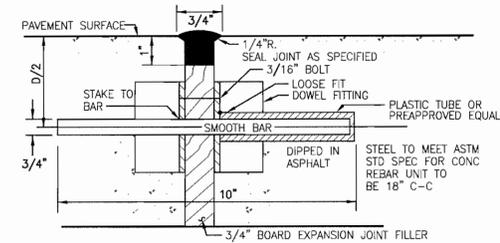
SECTION SIDEWALK TO EXISTING SIDEWALK



SECTION CONTROL JOINT TO BE SPACED A MAXIMUM OF 6'-0" APART.

SECTION CONTROL JOINT

EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB. STAKES FOR TRANSVERSE JOINTS SHALL NOT BE PLACED CLOSER THAN 6' TO A LONGITUDINAL JOINT. THE TOP OF EACH STAKE SHALL NOT BE LESS THAN 1-1/2" BELOW THE FINISH SURFACE.



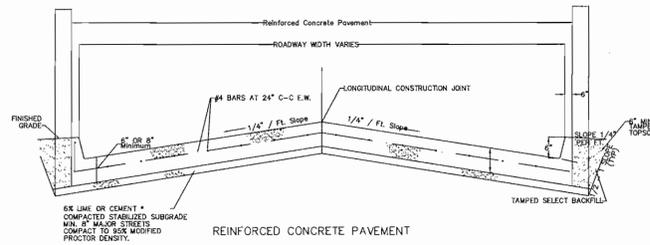
DOWEL TYPE EXPANSION JOINT

**SIDEWALK GENERAL NOTES**

- STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS.
- EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 48 FEET. MAXIMUM SPACING FOR CONTROL JOINTS SHALL BE 'W' FEET.
- W = WIDTH OF SIDEWALK (6' TYPICAL).
- CENTER DOWEL HORIZONTALLY ON JOINT.
- CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN 2" MINIMUM COVER.

**SIDEWALK DETAILS**

NOT TO SCALE



**TYPICAL PAVING (CONCRETE)**

NOT TO SCALE

**NOTE:**

For Plasticity Index > 20 - Use Lime Stab.  
For Plasticity Index < 10 - Use Cem. Stab.  
For Silty Clays - Use Lime - Fly Ash

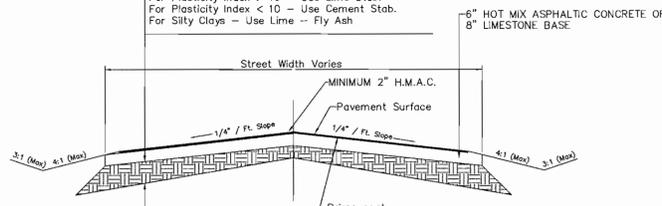
For P.I. between 10 and 20, the lab certification is required if no stabilization is used.

Construct sawed joints at 20' centers. Expansion joints to be at intersections, bridges and other structures and at spacings not to exceed 60'. All joints to be properly sealed. A manually operated screed equipped with a power vibrator may be used. Hand finish shall be used when necessary.

6% Lime or Cement Stabilized Subgrade \*  
Compacted to 95% Modified Proctor Density,  
With Moisture Content  $\pm$  2.0% of  
Optimum Moisture.

MIN. 8" for Major Streets - (Greater Than 29' B-B)

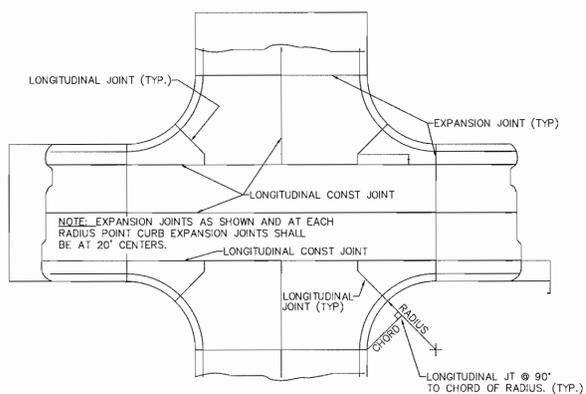
For Plasticity Index > 10 - Use Lime Stab.  
For Plasticity Index < 10 - Use Cement Stab.  
For Silty Clays - Use Lime - Fly Ash



- NOTES:**
- H.M.A.C. is Hot Mix Asphaltic Concrete. Use Type "D" per Texas D.O.T. Standard Specifications, Item No. 340.
  - Asphalt sections shall be used only if approved by the City Engineer and confirmed by the Planning Commission.

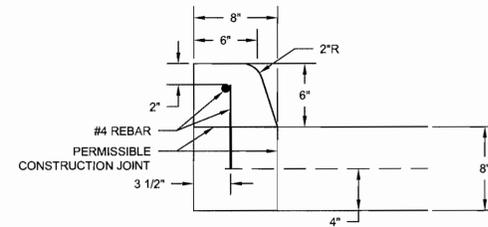
**TYPICAL H.M.A.C PAVING**

NOT TO SCALE



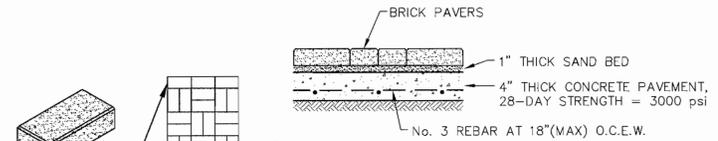
**CONCRETE INTERSECTION**

NOT TO SCALE



**TYPE II CURB (MONOLITHIC)**

NOT TO SCALE



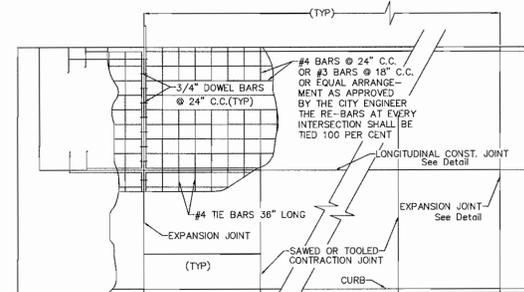
BRICK DIMENSIONS:  
7-13/16" x 3-7/8" x 2-3/8"

**NOTES:**

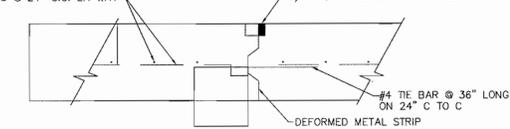
- BRICK PAVERS SHALL BE HOLLAND STONE BY PAVESTONE IN RIVER RED COLOR. MATCH EXIST COLOR & PATTERN.
- ALL BRICK PAVING SURFACES SHALL FOLLOW A PARQUET PATTERN WITH BORDER AS SHOWN ABOVE.
- SALVAGE EXISTING PAVERS FOR REUSE ONCE PAVEMENT IS REPAIRED.
- REPLACE PAVERS THAT ARE BROKEN OR DAMAGED.

**BRICK PAVER DETAIL**

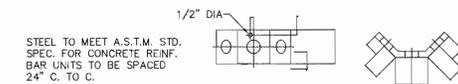
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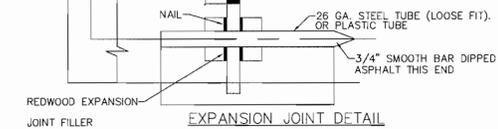
#4 # BARS @ 24" C.C. EA WAY



LONGITUDINAL CONST. JOINT DETAIL



EXPANSION JOINT DETAIL



**CONCRETE PAVEMENT**

NOT TO SCALE

REV	DATE	BY	APP	COMMENT
1				
2				
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4				

PREPARED FOR: CITY OF SHENANDOAH, 2995 L.S.N., BRYAN, TEXAS 77802  
 DATE: APRIL 24, 2013  
 DRAWN BY: KGN  
 PROJECT MANAGER: DAVID L. BESLY, P.E.

**Bleyl & Associates**  
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100 RUGENT STREET  
 BRYAN, TEXAS 77801  
 PHONE: (979) 766-8633  
 FAX: (979) 766-3833  
 TEXAS BOARD OF PROFESSIONAL ENGINEERS F-078

**PAVEMENT DETAILS**

TAMINA ROAD AT  
 DAVID MEMORIAL DRIVE  
 INTERSECTION IMPROVEMENTS

CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS

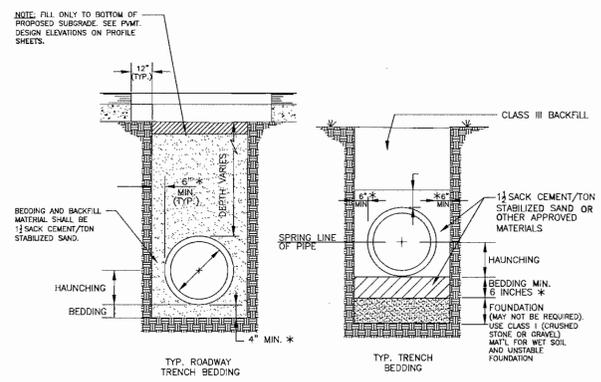
STATE OF TEXAS  
 DEREK WIND  
 98212  
 LICENSED PROFESSIONAL ENGINEER

4/24/13

PROJECT NUMBER  
 10934

FILE NAME:  
 10934-09.PWT DTL3.DWG

SHEET:  
 09 OF 12



**TYP. ROADWAY TRENCH BEDDING**

**TYP. TRENCH BEDDING**

FOUNDATION IS REQUIRED WHEN THE TRENCH BOTTOM IS UNSTABLE.

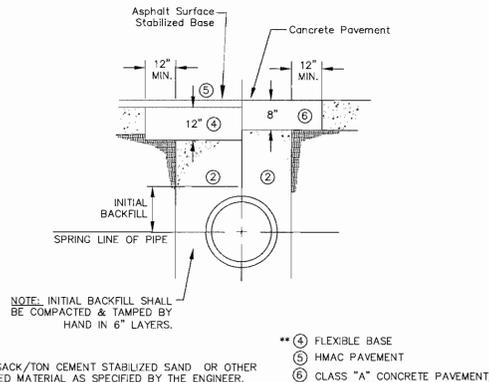
CLASS I ANGLULAR, 1/4" TO 1-1/2" GRADED STONE, INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE, SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE AND CRUSHED SHELLS.

CLASS II COARSE SANDS AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF 1-1/2", INCLUDING VARIOUSLY GRADED SANDS, AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NONCOHESIVE, EITHER WET OR DRY. SOIL TYPES GW, GP, SW, AND SP ARE INCLUDED IN THIS CLASS.

CLASS III FINE SAND AND CLAYEY GRAVELS, INCLUDING FINE SANDS AND SAND-CLAY MIXTURES, AND GRAVEL CLAY MIXTURES. SOIL TYPES GM, GC, SM AND SC ARE INCLUDED IN THIS CLASS.

**TYPICAL STORM SEWER BEDDING AND TRENCH DETAIL**

NOT TO SCALE



**TYPICAL STORM SEWER BACKFILL AND TRENCH REPAIR**

NOTE: INITIAL BACKFILL SHALL BE COMPACTED & TAMPED BY HAND IN 6" LAYERS.

CLASS "A" CONCRETE PAVEMENT, REINFORCED TO MATCH EXISTING PAVEMENT.

COMPACTED BY TAMPING OR VIBRATION AS APPROPRIATE.

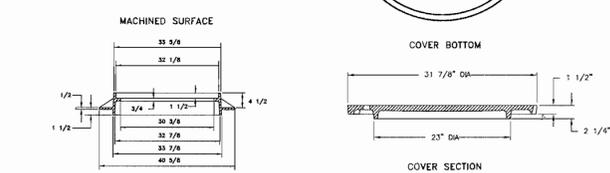
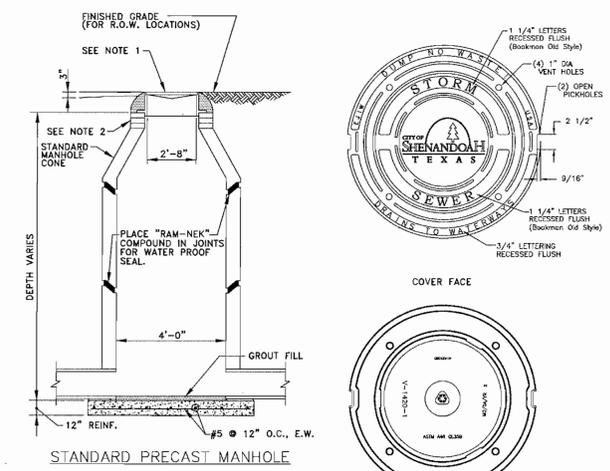
TAMPED PNEUMATICALLY OR MECHANICALLY TO 95% MODIFIED PROCTOR DENSITY.

**NOTES FOR UTILITY TRENCH REPAIR OF EXISTING ROADWAYS:**

- ALL TRENCHES UNDER CURB OR PAVING MUST BE BACKFILLED WITH 1/2 SACK PER TON CEMENT STABILIZED SAND, OR OTHER APPROVED MATERIAL AS SPECIFIED BY THE ENGINEER.
- ANY PAVEMENT DAMAGED DURING TRENCHING SHALL BE REMOVED AND REPLACED TO ORIGINAL CONDITION OR BETTER.
- STREET PAVEMENT SHALL BE SAWCUT TO A NEAT STRAIGHT LINE WITH THE EDGES FREE OF LOOSE MATERIAL.
- ALL COLD JOINT SURFACES SHALL BE TACKED WITH EMULSION WHICH SHALL HAVE "BROKEN" PRIOR TO PATCHING.
- COMPLETED PATCH SHALL NOT DEVIATE FROM EXISTING SURFACE MORE THAN 0.03 FT. / 10 FT. IN PROFILE OR 0.05 FT. / 10 FT. IN CROSS-SECTION WHEN MEASURED WITH A 10 FT. STRAIGHT EDGE.
- COMPLETE PATCH SHALL NOT POND WATER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REPAIRED AND PAVED SECTION FOR ONE YEAR AFTER COMPLETION.

**TYPICAL STORM SEWER BACKFILL AND TRENCH REPAIR**

NOT TO SCALE



**STORM SEWER MANHOLE**

NOT TO SCALE

**GENERAL NOTES**

- MATERIALS, CONSTRUCTION AND TESTING TO BE IN ACCORDANCE WITH THE CITY OF SHENANDOAH ORDINANCES AND SPECIFICATIONS, LATEST PRINTING AND AMENDMENTS THERETO.
- CONTRACTOR TO OBTAIN ALL DEVELOPMENT AND CONSTRUCTION PERMITS REQUIRED BY MONTGOMERY COUNTY, TEXAS, AND THE CITY OF SHENANDOAH AT HIS EXPENSE PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES OR RAILROADS AFFECTED BY HIS OPERATIONS AND THE CITY OF SHENANDOAH, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING, (TELEPHONE: (281) 298-5622) 48 HOURS PRIOR TO COMMENCEMENT OF WORK IN STREET RIGHTS-OF-WAY OR EASEMENTS.
- ALL EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED TO BE COMPLETED OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE. CONTRACTOR HAS SOLE RESPONSIBILITY FOR FIELD VERIFICATION OF ALL EXISTING FACILITIES SHOWN ON DRAWINGS. CONTRACTOR SHALL COORDINATE ALL CONFLICTS WITH THE APPROPRIATE GOVERNING AGENCY.
- THE LOCATION OF AT&T COMPANY, ENTEX, AND ENTERGY-GSU (GULF STATES UTILITIES) UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL REQUEST THE EXACT LOCATION OF THESE FACILITIES BY CALLING THE UTILITY COMPANIES, AT LEAST 48 HOURS BEFORE COMMENCING WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH OCCURS DUE TO HIS FAILURE TO REQUEST THE LOCATION AND PRESERVATION OF THESE UNDERGROUND FACILITIES. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF CONSTRUCTION OPERATIONS WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN 6 FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATION, TITLE 29, PART 1910.130(1) AND PART 1926.440 (A) (15) REQUIRE A MINIMUM CLEARANCE OF 10 FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF YOU OR YOUR COMPANY MUST WORK NEAR ENERGIZED OVERHEAD POWER LINES, CALL THE POWER COMPANY FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT YOUR EXPENSE.
- CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISIONS OF OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING TRENCHING AND SHORING. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUB-PART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989.
- DETAILS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY CHAPTER 756, SUBCHAPTER "C" OF THE TEXAS HEALTH AND SAFETY CODE.
- CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, ALONG EXISTING ROADWAYS AND TRAFFIC AREAS.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER. ALL CONSTRUCTION RUNOFF SHALL COMPLY WITH STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS OR PROVIDE ALL-WEATHER DETOURS AROUND CONSTRUCTION SITE, PROVIDE PUBLIC NOTIFICATION, AND USE UNIFORMED POLICE OFFICERS TO CONTROL TRAFFIC.
- EXISTING PAVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF SHENANDOAH STANDARDS. ALL ASPHALT AND CONCRETE DRIVEWAYS EXCAVATED DURING CONSTRUCTION SHALL BE BACKFILLED WITH STABILIZED MATERIAL AND RETURNED TO EXISTING CONDITIONS. ALL STATE AND COUNTY HIGHWAY PAVEMENT AND RAILROAD RIGHT-OF-WAYS TO BE BORED ACCORDING TO THE RULES, REGULATIONS AND REQUIREMENTS FOR APPROVAL AND ACCEPTANCE BY SAID AGENCIES. SEE PAVING DETAIL SHEET FOR REQUIREMENTS.
- EXISTING ROADS AND/OR RIGHT-OF-WAYS DISTURBED DURING CONSTRUCTION SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING THE WORK, UPON COMPLETION OF THE PROJECT.
- AFTER DISTURBED AREAS HAVE BEEN COMPLETED TO THE LINES, GRADES, AND CROSS-SECTIONS SHOWN ON THE PLANS, SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS TO ESTABLISH ADEQUATE VEGETATION COVERAGE TO ELIMINATE EROSION. IF NO PROVISION FOR PLANTING GRASS IS INCLUDED IN THE PLANS OR SPECIFICATIONS, THE MINIMUM REQUIREMENT FOR THIS ITEM WILL BE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR "SOODING OR SEEDING FOR EROSION CONTROL."
- INCLUDE PRICE OF ALL BEDDING AND BACKFILL OF TYPE REQUIRED, IN PRICE BID PER LINEAR FOOT OF PIPE.
- WHEN TRENCH CONDITION REQUIRES THE USE OF WELL POINTS, THIS IS TO BE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE MUD AND/OR DIRT DEPOSITED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY. ALL EQUIPMENT AND DEBRIS FROM CONSTRUCTION TO BE MOVED AT END OF PROJECT.

**STORM SEWER MANHOLE**

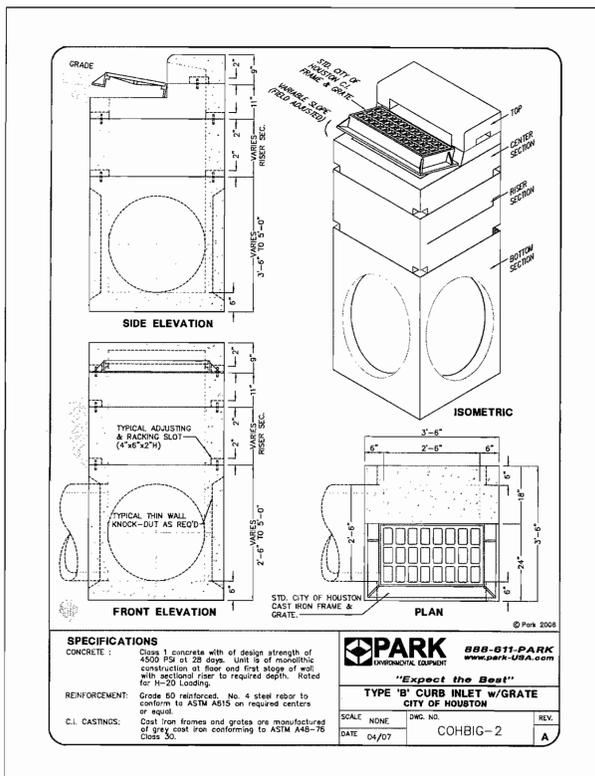
NOT TO SCALE

**GENERAL NOTES**

NOTE: THIS INLET IS THE STYLE AND SIZE TO BE USED FOR THIS PROJECT. IT IS A STANDARD INLET USED BY THE CITY OF HOUSTON, HOWEVER, NO WORDING OR LETTERING WITH THE WORDS "CITY OF HOUSTON" SHALL BE VISIBLE ON THE GRATE OR INLET. ANY LETTERING OR LABELING SHALL BE "CITY OF SHENANDOAH", OR A GENERIC INLET OF THIS TYPE CAN BE INSTALLED. ANY OTHER SIMILAR OR COMPARABLE INLET DETAIL BY ANOTHER MANUFACTURER SHALL BE SUBMITTED TO THE CITY AND BLEYL & ASSOC. FOR APPROVAL.

**STORM SEWER CONSTRUCTION NOTES**

- STORM SEWER AND LEADS SHALL BE REINFORCED CONCRETE PIPE, ASTM C-76, CLASS III, WITH O-RING RUBBER GASKET JOINTS, AND SHALL BE INSTALLED, BEDDED AND BACKFILLED IN ACCORDANCE WITH DETAILS ON THIS SHEET. NOTE: HDPE PIPE MAY BE USED PROVIDED THAT IT IS BACKFILLED WITH CEMENT STABILIZED SAND OUTSIDE OF PAVED AREAS. (1 1/2 SACK CEMENT/TON), OR OTHER BACKFILL MATERIALS THAT HAVE BEEN APPROVED BY THE CITY.
- ALL PROPOSED PIPE STUB OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH 8 INCH BRICK WALLS UNLESS OTHERWISE NOTED.
- CULVERTS
  - ALL BOX CULVERTS INSTALLED SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF CEMENT STABILIZED SAND (CEMENT STABILIZED SAND SHALL BE 1 1/2 SACK CEMENT PER TON).
  - FOR INSTALLATION OF PRE-CAST CONCRETE BOX CULVERTS IN POOR SOIL CONDITIONS, A 7 INCH REINFORCED CONCRETE SLAB SHALL BE INSTALLED.
  - FOR INSTALLATION OF MONOLITHIC REINFORCED CONCRETE BOX CULVERTS IN POOR SOIL CONDITIONS, A 4 INCH THICK CLASS "C" CONCRETE SEAL SLAB SHALL BE INSTALLED, PRIOR TO CONSTRUCTION OF BOX CULVERTS.
- STORM SEWER MANHOLES SHALL BE STANDARD PRE-CAST, UNLESS OTHERWISE NOTED.
- ALL STORM SEWER LEADS SHALL BE 18 INCH MINIMUM UNLESS OTHERWISE INDICATED.
- WHEN MANHOLE FRAME AND COVER IS REQUIRED, USE EAST JORDAN 24" FRAME AND COVER (OR EQUAL) WITH THE CITY OF SHENANDOAH LOGO EMBEDDED IN LID.
- FOR ADJUSTMENT OF MANHOLE LIDS USE STANDARD CONCRETE RINGS.
- CONCRETE USED FOR ALL POURED-IN-PLACE MANHOLES, INLETS, WINGWALLS, HEADWALLS AND OTHER APPURTENANCES TO BE CLASS "A" CONCRETE WITH 3,000 P.S.I. STRENGTH AT 28 DAYS.
- ALL EXPOSED CORNERS TO BE CHAMFERED 3/4".



**TYPICAL RECESSED INLET DETAIL**

NOT TO SCALE

REV	DATE	BY	APP	COMMENT

PREPARED FOR: CITY OF SHENANDOAH, SHENANDOAH, TEXAS 77881  
 TEL: (281) 298-5622  
 FAX: (281) 298-5625

SCALE: AS SHOWN  
 DATE: April 24, 2013  
 DRAWN BY: KSR  
 PROJECT MANAGER: DAVID L. BESLEY, P.E.

**Bleyl & Associates**  
 Project Engineering & Management  
 1722 Broadmoor Dr., Suite 210  
 Bryan, Texas 77802  
 Phone: (979) 268-1125  
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100 Burgent Street  
 Bryan, Texas 77801  
 Phone: (936) 441-7833  
 Fax: (936) 766-3833

Texas Board of Professional Engineers P-678

**DRAINAGE DETAILS**

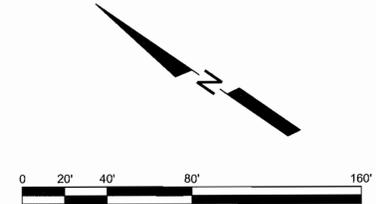
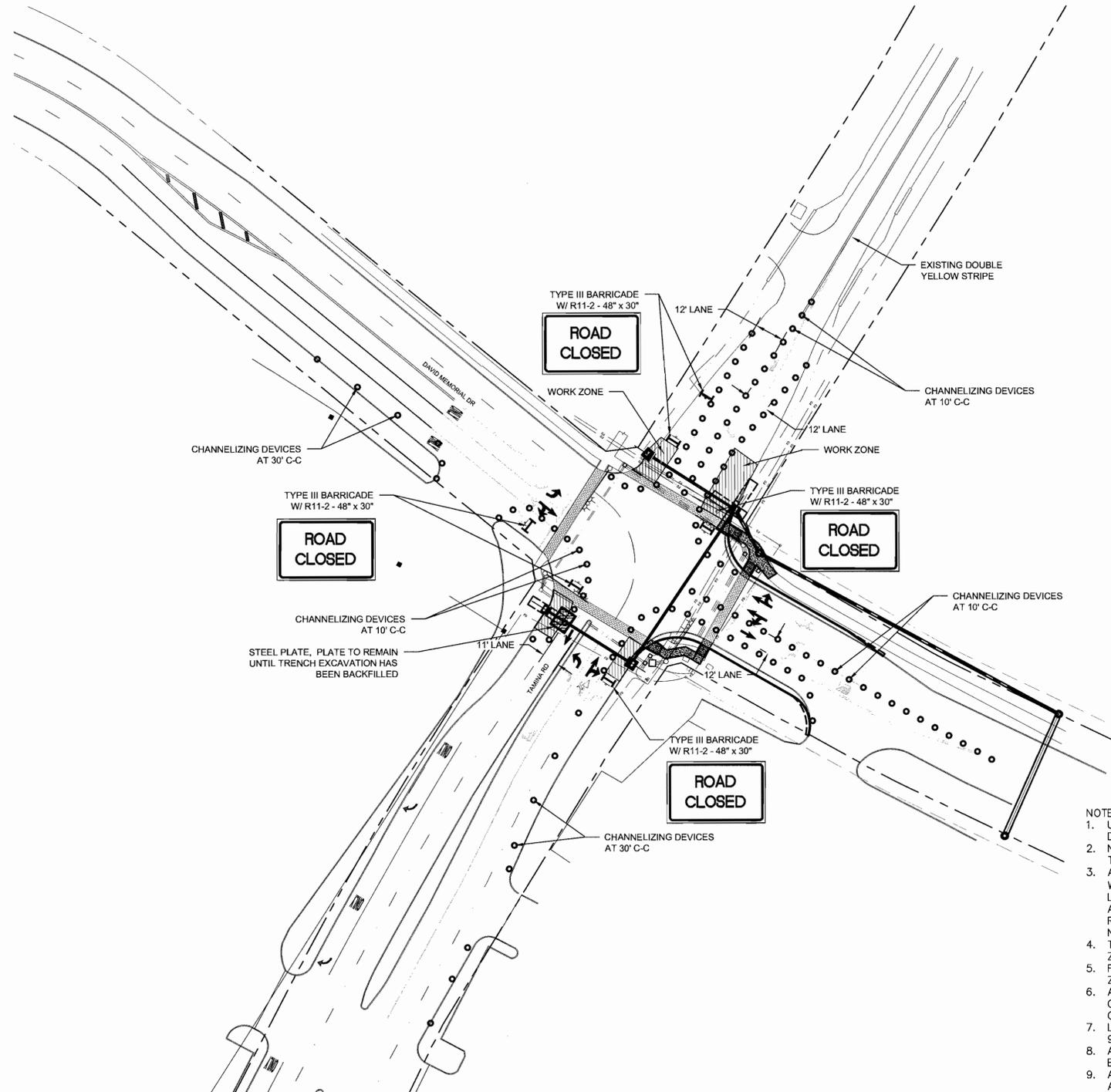
TAMINA ROAD AT  
 DAVID MEMORIAL DRIVE  
 INTERSECTION IMPROVEMENTS

CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS

PROJECT NUMBER  
**10934**

FILE NAME:  
 10934-10-DTL-DRAINAGE.DWG

SHEET:  
**10** OF **12**



- NOTES**
1. USE VERTICAL PANEL OR EDGELINE DELINEATORS AS TRAFFIC CONTROL DEVICES.
  2. NOTIFY CITY OF SHENANDOAH 10 WORKING DAYS BEFORE CHANGES IN TRAFFIC CONTROL.
  3. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION. THIS TRAFFIC CONTROL PLAN IS PROVIDED TO BE USED AS A GENERAL LAYOUT FOR TRAFFIC CONTROL PLAN. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ADDITIONAL TRAFFIC CONTROL DEVICES AS NECESSARY TO MAINTAIN THE SAFETY OF WORKERS AND THE PUBLIC SAFETY.
  4. THE MINIMUM LANE WIDTH ALLOWED IS 10 FEET. THE MINIMUM BUFFER ZONE BETWEEN THE WORK ZONE AND ADJACENT TRAFFIC IS 2 FEET.
  5. FLORESCENT ORANGE SHALL BE THE BACKGROUND COLOR ON ALL WORK ZONE SIGNS.
  6. ALL ADVANCED WARNING SIGNS TO BE SET PRIOR TO START OF CONSTRUCTION ACTIVITIES AND TO REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE.
  7. LANE CLOSURES SHALL BE DURING OFF PEAK HOURS ONLY MON-FRI 9:00AM-4:00 PM.
  8. ALL PORTABLE SIGNING, DRUMS AND CONES SHALL BE REMOVED AT THE END OF EACH DAY.
  9. ACCESS TO EXISTING BUSINESSES OR RESIDENCES SHALL BE MAINTAINED AT ALL TIMES.
  10. IF WORK ZONE TRENCH ARE TO REMAIN OVERNIGHT CONTRACTOR SHALL PLACE AND ANCHOR A STEEL PLATE OVER OPENING.
  11. TRAFFIC CONTROL PLAN SHOWN IS FOR INFORMATIONAL PURPOSES ONLY AND PROVIDES AN EXAMPLE OF REQUIRED WORK FOR VARIOUS LANE CLOSURES. ALL LANE CLOSURES SHOWN SHALL NOT OCCUR AT THE SAME TIME UNLESS ABSOLUTELY NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL AS REQUIRED FOR EACH STAGE OF THE PROJECT AND SHALL PROVIDE A SCHEDULE AND ASSOCIATED PLANS FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
  12. LANE CLOSURES CAN BE ALLOWED ON WEEKENDS AND AFTER 4 PM ON WEEKDAYS WITH ADVANCED APPROVAL FROM THE CITY.

REV	DATE	BY	APP	COMMENT
1				
2				
3				

PREPARED FOR: SHENANDOAH, TEXAS 77881  
 SHEENANDOAH, TEXAS 77881  
 SCALE: AS SHOWN  
 DATE: April 24, 2013  
 DRAWN BY: KGN  
 PROJECT MANAGER: DAVID L. BESH, P.E.

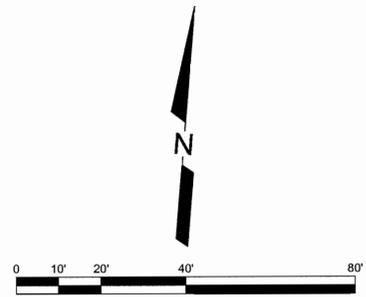
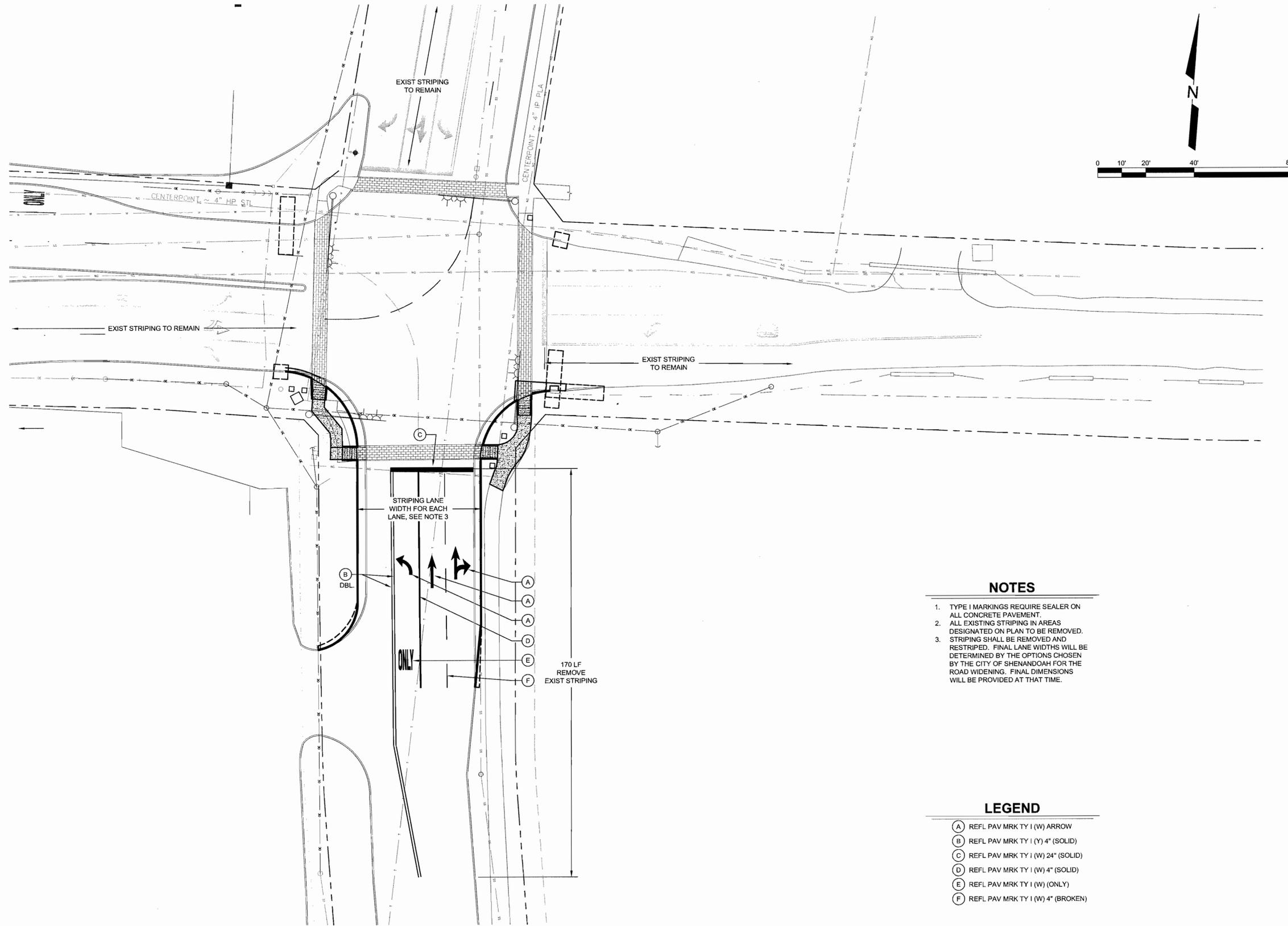
**Bleyl & Associates**  
 Project Engineering & Management  
 1722 Broadmoor Dr, Suite 210 100 Nugent Street  
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 Texas Board of Professional Engineers F-678

**TRAFFIC CONTROL PLAN**  
 TAMINA ROAD AT  
 DAVID MEMORIAL DRIVE  
 INTERSECTION IMPROVEMENTS  
 CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS



PROJECT NUMBER  
**10934**  
 FILE NAME:  
 10934-11 TRAFFIC CONTROL PLAN.DWG  
 SHEET:  
**11** OF **12**

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**NOTES**

1. TYPE I MARKINGS REQUIRE SEALER ON ALL CONCRETE PAVEMENT.
2. ALL EXISTING STRIPING IN AREAS DESIGNATED ON PLAN TO BE REMOVED.
3. STRIPING SHALL BE REMOVED AND RESTRIPIED. FINAL LANE WIDTHS WILL BE DETERMINED BY THE OPTIONS CHOSEN BY THE CITY OF SHENANDOAH FOR THE ROAD WIDENING. FINAL DIMENSIONS WILL BE PROVIDED AT THAT TIME.

**LEGEND**

- (A) REFL PAV MRK TY I (W) ARROW
- (B) REFL PAV MRK TY I (Y) 4" (SOLID)
- (C) REFL PAV MRK TY I (W) 24" (SOLID)
- (D) REFL PAV MRK TY I (W) 4" (SOLID)
- (E) REFL PAV MRK TY I (W) (ONLY)
- (F) REFL PAV MRK TY I (W) 4" (BROKEN)

REV	DATE	BY	APP	COMMENT
A				
A				
A				

PREPARED FOR:  
 CITY OF SHENANDOAH  
 2955 Ad N  
 TEL: (817) 298-5225  
 TEXAS 77381  
 DRAWN BY: KGN  
 PROJECT MANAGER: DAVID L. BLESY, P.E.

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 Texas Board of Professional Engineers F-678

**PAVEMENT MARKINGS PLAN**  
 TAMINA ROAD AT  
 DAVID MEMORIAL DRIVE  
 INTERSECTION IMPROVEMENTS  
 CITY OF SHENANDOAH, MONTGOMERY COUNTY, TEXAS



PROJECT NUMBER  
**10934**  
 FILE NAME:  
 10934-12 PAVK.DWG  
 SHEET:

F:\0905\10934 TAMINA DAVID MEMORIAL DRIVE INTERSECTION CD-10934\10934-12 PAVK LAYOUT 4/24/2013 1:29 PM CARL RUSHING