REQ'D SEWER MANHOLE
TOC ELEV: −1.06'
INV:± −6.84'(V.I.F.)

SEWER MANHOLE
TOC EVEL: −1.11'
" INV: −6.91'
" INV: −6.91'

BARTOLO DRIVE

SEWER MANHOLE
TOC EVEL: −0.90'
" INV: −5.90'
" INV: −5.90'

EXIST. 36" CMP
INV. = −6.36

FLOOD ZONE "X"

FLOOD ZONE "AE"

EXIST. 36" CMP

REQ'D 176'−8" SEWER LINE @ 0.40%

REQ'D SWALE

SLOPE

REQ'D 175'−8" SEWER LINE @ 0.40%

REQ'D SEWER MANHOLE
TOC ELEV: −0.82'
INV: −5.40'(MIN.)

SEE MECHANICAL FOR CONTINUATION

EAST JUDGE PEREZ DRIVE

FINISHED FLOOR
ELEVATION = +3'−0"
(NAVD88)

REQ'D 6" METER AND VALVE − SEE DETAIL ON SHEET SD−10

REQ'D BACKFLOW PREVENTER

TIE INTO EXISTING 8" WATER LINE (HOT TAP)

REQ'D 145'−6" WATERLINE (FIRE PROTECTION)

SEE MECHANICAL FOR CONTINUATION

SEE MECHANICAL FOR CONTINUATION

FLOOD ZONE AE BFE=9

REQ'D 280'−2 ½" WATERLINE (DOMESTIC)

REQ'D 2−1/2" METER AND VALVE − SEE DETAIL ON SHEET SD−10

REQ'D FIRE CONNECTION (2−1/2" SIAMESE CONNECTION W/ KNOX LOCKING CAP)

JUDY DRIVE

CURB INLET
TOC ELEV: −0.89'
" INV: −0.89'

CURB INLET
TOC ELEV: −0.78'
" INV: −0.78'

1 UTILITY PLAN
C100 1" = 20'-0"

Meyer Engineers, Ltd. ENGINEERS & ARCHITECTS

MATERIALS KEYING/ GENERAL NOTES

LEGEND OF SYMBOLS (NEW)

- S — GRAVITY SANITARY SEWER MAIN
- D — STORM SEWER MAIN
- FM — FORCE MAIN
- W — WATER MAIN
- G — GAS MAIN
- T — TELEPHONE LINE
- E — ELECTRIC LINE
- REQUIRED R.O.W.
- DITCH OR SWALE
- PERFORATED PVC W/ CLEANOUT
- SEWER MANHOLE
- CLEANOUT
- NEW LIFT STATION
- NEW VALVE PIT
- FORCE MAIN AIR RELEASE VALVE
- DROP INLET
- CB−TYPE 1
- CB−TYPE 2
- CB−TYPE 3
- DRAIN MANHOLE
- CULVERT
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- POWER POLE
- STREET LIGHT
- MISC. LIGHT POLE
- ⊘ 12.34 — ELEVATION
- EXISTING STRUCTURE (NOT IN SCOPE)
- REQ'D BIOSWALE (SEE LANDSCAPE)
- REQ'D STORM DRAIN CONNECTION (SEE MECHANICAL)
- INFILTRATION TRENCH

No.	Description	Date

KEY PLAN

DONOVAN P. DUFFY
License No. 41844
PROFESSIONAL ENGINEER
12−20−2021
CIVIL ENGINEERING

Mathes Brierre ARCHITECTS + BM ARCHITECTS BEAZLEY MOLIERE
A JOINT VENTURE

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New Orleans, Louisiana 70170-4100
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300 Heymann Blvd.
Lafayette, Louisiana 70503
337.233.0614

PROJECT TITLE

ST. BERNARD PARISH PUBLIC LIBRARY

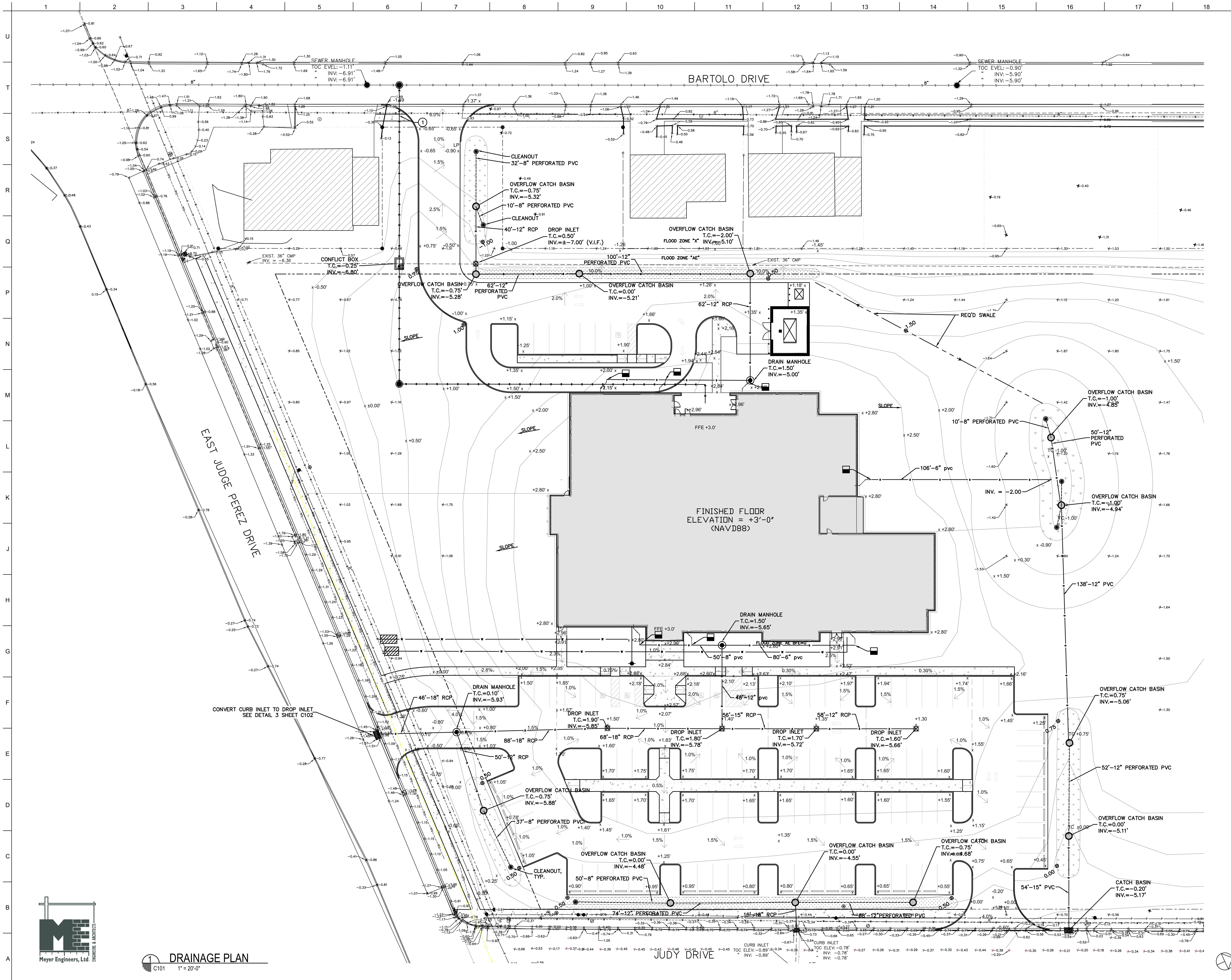
ST. BERNARD PARISH

CONSTRUCTION DOCUMENTS

DESIGNED BY	CHECKED BY
DPD	DPD
DRAWN BY	DATE
AJS, CDR	12.20.21

SHEET TITLE: UTILITY PLAN

PROJECT NO.	SHEET NO.
MBA - 11884 ABM - 201803	C100



Meyer Engineers, Ltd. ENGINEERS & ARCHITECTS

1 DRAINAGE PLAN
C101 1" = 20'-0"

MATERIALS KEYING/ GENERAL NOTES

LEGEND OF SYMBOLS (NEW)

S	GRAVITY SANITARY SEWER MAIN
D	STORM SEWER MAIN
FM	FORCE MAIN
W	WATER MAIN
G	GAS MAIN
T	TELEPHONE LINE
E	ELECTRIC LINE
	REQUIRED R.O.W.
	DITCH OR SWALE
	PERFORATED PVC W/ CLEANOUT
◉	SEWER MANOLE
⊗	CLEANOUT
	NEW LIFT STATION
	NEW VALVE PIT
	FORCE MAIN AIR RELEASE VALVE
■	DROP INLET
	CB-TYPE 1
	CB-TYPE 2
	CB-TYPE 3
◉	DRAIN MANHOLE
	CULVERT
⧓	WATER VALVE
○	WATER METER
	FIRE HYDRANT
●	POWER POLE
	STREET LIGHT
	MISC. LIGHT POLE
⌀12.34	ELEVATION
▨	EXISTING STRUCTURE (NOT IN SCOPE)
	REQ'D BIOSWALE (SEE LANDSCAPE)
	REQ'D STORM DRAIN CONNECTION (SEE MECHANICAL)
	INFILTRATION TRENCH

No.	Description	Date

KEY PLAN

STATE OF LOUISIANA
DONOVAN P. DUFFY
License No. 41844
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
12-20-2021

Mathes Brierre ARCHITECTS + ARCHITECTS BEAZLEY MOLIERE
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PROJECT TITLE

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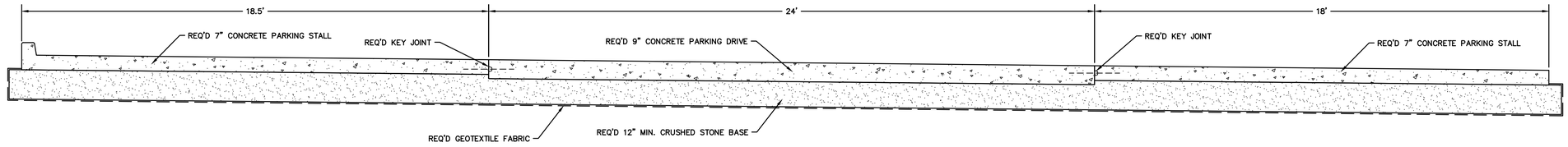
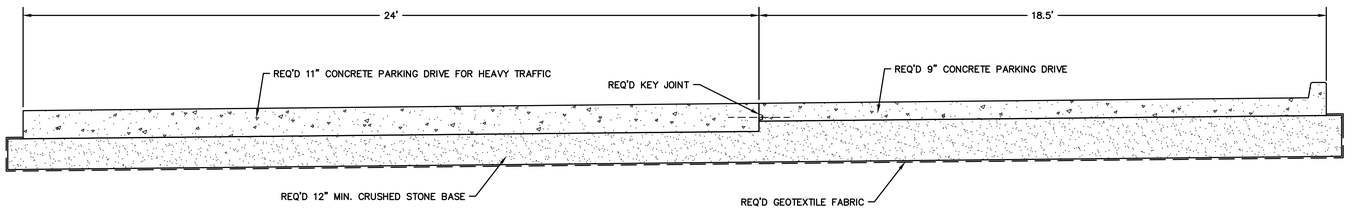
CONSTRUCTION DOCUMENTS

DESIGNED BY DPD	CHECKED BY DPD
DRAWN BY AJS, CDR	DATE 12.20.21
SHEET TITLE DRAINAGE PLAN	
PROJECT NO. MBA - 11884 ABM - 201803	SHEET NO. C101

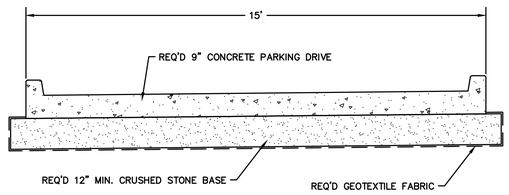


NOTE: SEE ST. BERNARD STANDARD DETAILS FOR PAVEMENT/JOINT DETAILS.

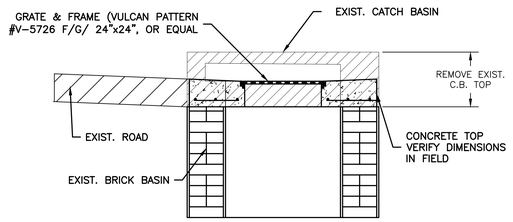
1 PARKING LOT SECTION — C100 | C102 — t2



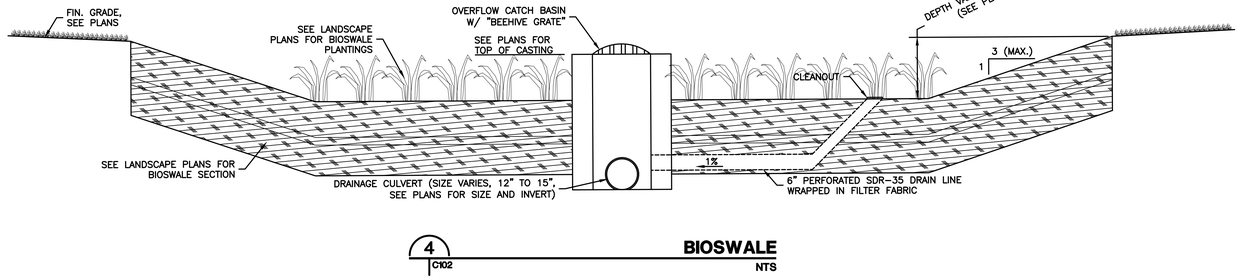
NOTE: SEE ST. BERNARD STANDARD DETAILS FOR PAVEMENT/JOINT DETAILS.



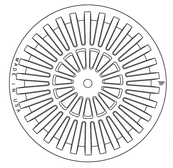
2 EMPLOYEE PARKING LOT SECTION — C100 | C102 — t2



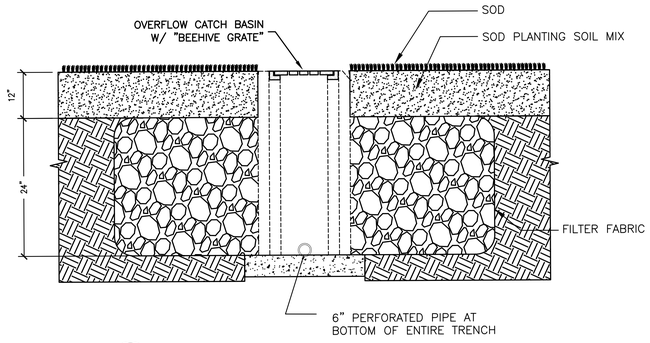
3 DROP INLET CONVERSION — C102 — NTS



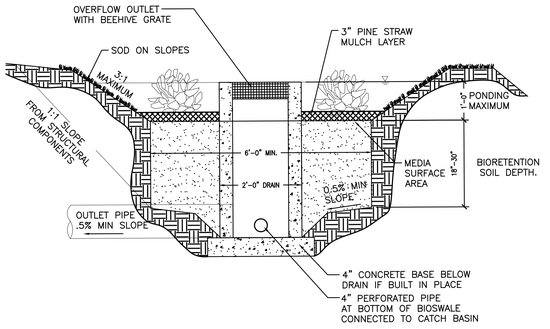
4 BIOSWALE — C102 — NTS



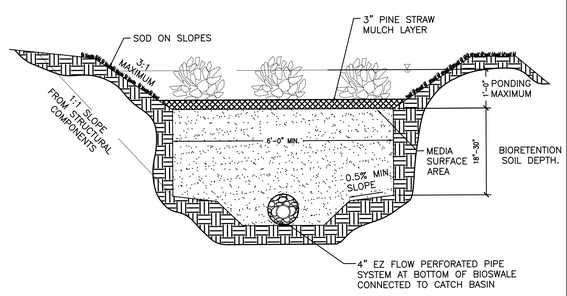
5 BEEHIVE GRATE — C102 — NTS



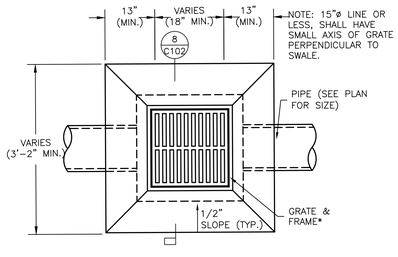
6 INFILTRATION TRENCH — C102 — NTS



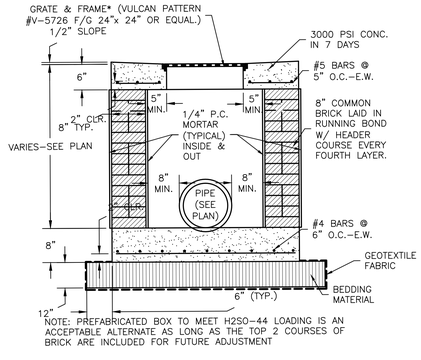
7 BIOSWALE @ CATCH BASIN — C102 — NTS



8 BIOSWALE TYPICAL SECTION — C102 — NTS



9 DROP INLET - PLAN — C102 — N.T.S.



10 DROP INLET - SECTION — C102 — N.T.S.

MATERIALS KEYING/ GENERAL NOTES

No.	Description	Date

KEY PLAN

DONOHAN P. DUFFY
Lic. No. 41364
PROFESSIONAL ENGINEER
12-20-2021
CIVIL ENGINEERING

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PROJECT TITLE

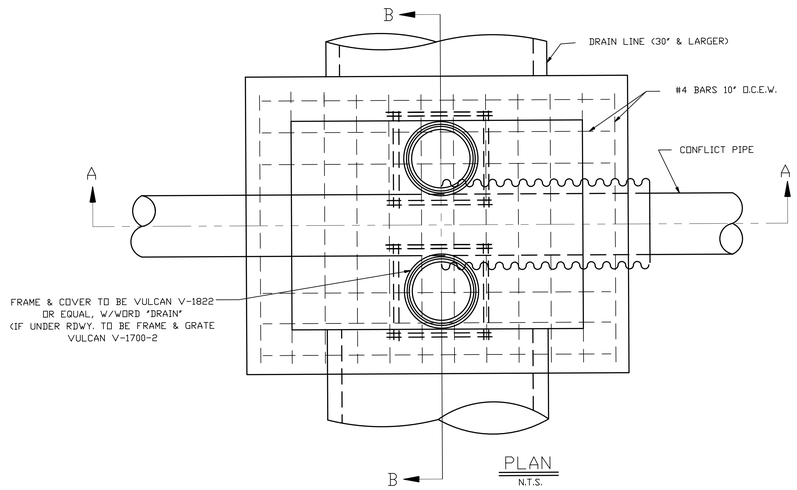
ST. BERNARD PARISH PUBLIC LIBRARY

ST. BERNARD PARISH

CONSTRUCTION DOCUMENTS

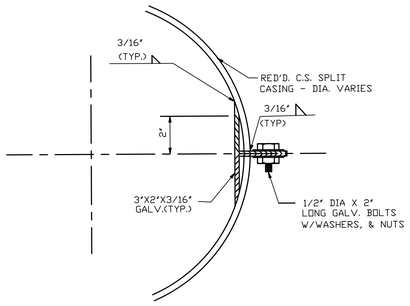
DESIGNED BY: DPD	CHECKED BY: DPD
DRAWN BY: AJS, CDR	DATE: 12.20.21
SHEET TITLE: PAVING & DRAINAGE DETAILS	
PROJECT NO.: MBA - 11884 ABM - 201803	SHEET NO.: C102

Meyer Engineers, Ltd. — ENGINEERS & ARCHITECTS



PLAN

N.T.S.

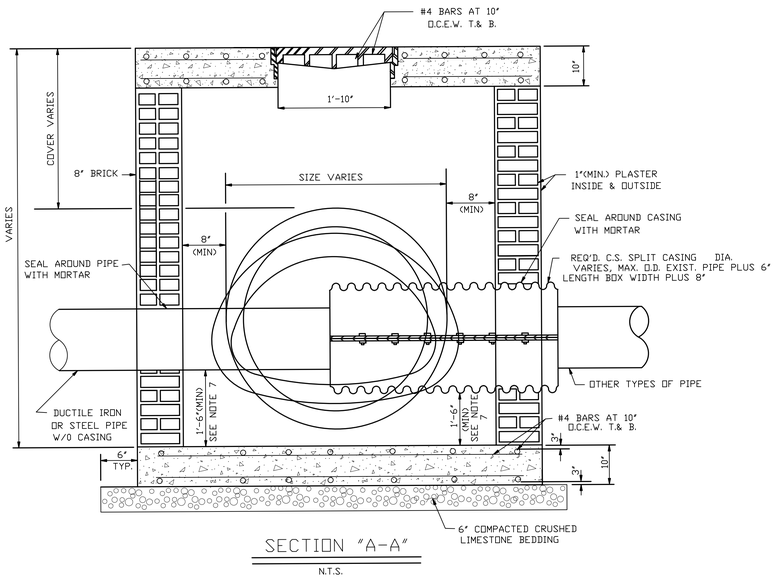


SPLIT CASING DETAIL

N.T.S.

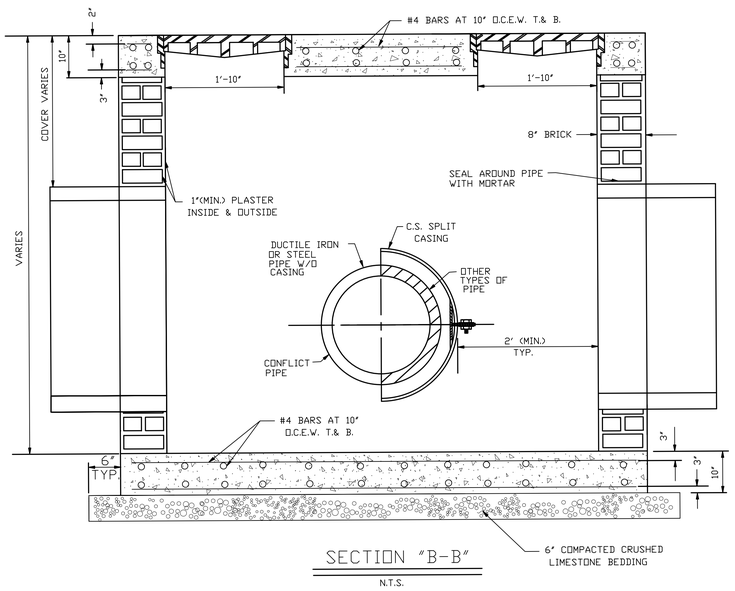
NOTES:

1. CONCRETE STRENGTH TO BE 3000 PSI (MIN.) AT 28 DAYS.
2. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. DESIGNATION A615G-GRADE 60.
3. ALL MASONARY TO BE LAID WITH RUNNING BOND AND HEADER COURSE, EVERY FOURTH LAYER.
4. THE MORTAR SHOULD BE TYPE "A", (2250 PSI COMPRESSION).
5. SPLIT CASING SHALL BE ASBESTOS BONDED BITUMINOUS COATED CORRUGATED STEEL, IN COMPLIANCE WITH SEC.701-LA. DOTD STD. SPEC. (1992 EDITION). THICKNESS SHALL BE A MINIMUM 8 GAUGE UNCOATED.
6. THE BRICK SHALL CONFORM TO AASHTO DESIGNATION M91, MANHOLE BRICK GRADE MM.
7. IF BOTTOM ELEVATION OF THE CONFLICT IS ABOVE THE UPPER 3RD. OF THE INSIDE DIAMETER OF THE DRAIN LINE THE INVERT OF THE CONFLICT BOX COULD BE THE SAME AS THE INVERT OF THE DRAIN LINE SUBJECT TO THE APPROVAL OF THE PARISH.
8. ALL WATER LINES IN CONFLICT BOX SHALL BE DUCTILE IRON PIPE. OTHER PIPE MATERIAL SHALL BE INSTALLED IN SPLIT CASING.
9. THE EXTERIOR COATING OF ALL DUCTILE IRON PIPE AND FITTINGS PLACED IN THE GROUND SHALL CONSIST OF THE STANDARD BITUMINOUS COATING PLUS A POLYETHYLENE TUBE FOR ADDITIONAL PROTECTION. THE POLYETHYLENE TUBE SHALL BE EIGHT (8) MILS THICK. THE POLYETHYLENE TUBE AND ITS INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE SPECIFICATION OF ANSI-A21.5 AND AWWA-C105.



SECTION "A-A"

N.T.S.



SECTION "B-B"

N.T.S.

CONFLICT BOX

N.T.S.

1 C102 **CONFLICT BOX DETAILS AND NOTES**

NTS

MATERIALS KEYING/ GENERAL NOTES

No.	Description	Date

KEY PLAN

Mathes Brierre + ABM ARCHITECTS BEAZLEY MOLIERE
A JOINT VENTURE

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PROJECT TITLE

ST. BERNARD PARISH PUBLIC LIBRARY

ST. BERNARD PARISH

CONSTRUCTION DOCUMENTS

DESIGNED BY: DPD	CHECKED BY: DPD
DRAWN BY: AJS, CDR	DATE: 12.20.21
SHEET TITLE: CONFLICT BOX DETAILS	
PROJECT NO.: MBA - 11884 ABM - 201803	SHEET NO.: C103

Meyer Engineers, Ltd. ENGINEERS & ARCHITECTS

GENERAL:

1. CONTRACTOR IS RESPONSIBLE FOR CLEANING UP ALL DIRT OFF THE STREET AS A RESULT OF HIS CONSTRUCTION ACTIVITIES DURING CONTRACT PERIOD.
2. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ADJOINING PAVEMENT WHICH RESULTED FROM HIS CONSTRUCTION ACTIVITIES.
3. BRIDGE APPROACH SLABS OR SLABS AT SPECIAL LOCATIONS SHALL BE DESIGNED TO ACCOMMODATE FIELD REQUIREMENTS AND CONDITION, SUBJECT TO APPROVAL BY THE PARISH ENGINEER.
4. CONTRACTOR IS REQUIRED TO EXTEND EMBANKMENT/SUB-BASE MINIMUM OF 2 FEET BEYOND THE EDGE OF CONCRETE PAVEMENT OR ONE FOOT OF BASE COURSE (STONE).
5. CONTRACTOR WILL KEEP ONE LANE OF TRAFFIC OPEN AT ALL TIMES.
6. AS IS POSSIBLE WITHOUT COST, THE GUTTER LINE OF THE ROADWAY SHALL BE ADJUSTED FOR SMOOTH FLOW OF SURFACE RUN-OFF TO THE NEAREST DRAINAGE INLET.
7. ALL TRAFFIC CONTROL DETAILS SHALL BE APPROVED BY THE PARISH ENGINEER.
8. ALL DRAWINGS / DETAILS / FIGURES INCLUDED IN THESE DOCUMENTS ARE STANDARD AND ARE SUBJECT TO ADJUSTMENTS DICTATED BY ENGINEER OR EXISTING FIELD CONDITIONS.
9. ALL EX. STRUCTURES AFFECTED BY CONSTRUCTION SHALL BE ADJUSTED TO MEET PROP. GRADE AND ALIGNMENT.
10. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES (PRIVATE AND PUBLIC) (INCLUDING STORM DRAINAGE PIPES OR STRUCTURES) BEFORE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, AND SIZE OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY FAILURE TO COMPLY WITH THESE INSTRUCTIONS (NO DIRECT PAY).
11. THE CONTRACTOR SHALL FIELD VERIFY THE LENGTH AND SIZE OF ALL REQUIRED WATER LINES PRIOR TO ORDERING THE PIPE MATERIAL.
12. IN THE EVENT OF ANY DISCREPANCIES AND / OR ERRORS FOUND IN THE DRAWINGS, OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. IF ENGINEER IS NOT NOTIFIED, THE CONTRACTOR SHALL TAKE RESPONSIBILITY FOR THE COST OF ANY WORK AND MATERIALS USED.
13. THE CONTRACTOR IS RESPONSIBLE FOR MONITORING CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND SEDIMENT CAUSED BY CONSTRUCTION. STORM DRAINAGE SYSTEMS ARE TO BE CLEANED AT THE COMPLETION OF THE PROJECT. (NO DIRECT PAY).
14. PRIOR TO COMMENCING ANY WATER LINE INSTALLATION, CONTRACTOR SHALL INVESTIGATE LOCATIONS OF PUBLIC AND PRIVATE UTILITIES THAT MAY BE IN CONFLICT WITH THE WATER LINE INSTALLATION.
15. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS TO PREVENT WATER LINE FAILURE DUE TO THRUST WHEN EXCAVATING NEAR WATER LINES AND FIRE HYDRANTS.
16. WARNING! CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING OVERHEAD AND SUBSURFACE UTILITIES IN AREA OF CONSTRUCTION. (NO DIRECT PAYMENT). ALL WORK IN THIS AREA SHALL BE THOROUGHLY COORDINATED WITH UTILITY COMPANY OWNER. COORDINATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. NOISE CONTROL - CONTRACTOR SHALL TAKE REASONABLE MEASURES TO AVOID UNNECESSARY NOISE APPROPRIATE FOR THE AMBIENT SOUND LEVELS IN THE AREA DURING WORKING HOURS. ALL CONSTRUCTION MACHINERY AND VEHICLES SHALL BE EQUIPPED WITH PRACTICAL SOUND MUFFLING DEVICES, AND OPERATED IN A MANNER TO CAUSE THE LEAST NOISES, CONSISTENT WITH EFFICIENT PERFORMANCE OF THE WORK.
18. DUST - CONTRACTOR SHALL TAKE REASONABLE MEASURES TO PREVENT UNNECESSARY DUST. EACH SURFACE SUBJECT TO DUSTING SHALL BE KEPT MOIST WITH WATER OR BY APPLICATION OF CHEMICAL DUST SUPPRESSANT. DUSTY MATERIALS IN PILES OR IN TRANSIT SHALL BE COVERED TO PREVENT BLOWING. (NO DIRECT PAY).
19. CONTRACTOR SHALL GIVE THOSE AFFECTED BY CONSTRUCTION 48 HOURS NOTICE PRIOR TO DISRUPTION OF DRIVEWAYS. DRIVEWAYS, OR TEMPORARY DRIVEWAYS SHALL BE OPEN AT ALL TIMES. CONTRACTOR TO GIVE ALL RESIDENTS AT LEAST 48 HOURS NOTICE PRIOR TO DISRUPTION OF WATER SERVICE DUE TO TIE-IN WORK OR ANY OTHER RELATED WORK THAT WILL DISRUPT NORMAL WATER SERVICE.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE EXISTING BASE COURSE UNDER EXISTING PAVEMENT BEYOND THE LIMITS OF REMOVAL. NO DIRECT PAYMENT SHALL BE MADE FOR ADDITIONAL GRANULAR MATERIAL OR BASE MATERIAL UNLESS OTHERWISE APPROVED BY THE ENGINEER.
21. CONTRACTOR SHALL REGRADE ALL AREAS AFFECTED BY CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE. WORK SHALL BE IN A WORKMAN LIKE MANNER AND IN ACCORDANCE WITH A/E REQUIREMENTS. IF CONTRACTOR DETERMINES THAT ANY AREAS AFFECTED BY CONSTRUCTION CANNOT BE REGRADED TO DRAIN, CONTRACTOR SHALL DOCUMENT (I.E. TAKE ELEVATIONS, PICTURES, ETC.) THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
22. ANY MATERIALS REMOVED DURING CONSTRUCTION AND DEEMED UNUSABLE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND HAULED OFF SITE TO A LOCATION APPROVED BY THE ST. BERNARD PUBLIC WORKS DEPT.,(BEYOND THE LIMITS OF THE PROJECT) AT THE CONTRACTOR'S EXPENSE.
23. THE CONTRACTOR SHALL PROVIDE FOR AND MAINTAIN THROUGH AND LOCAL TRAFFIC AT ALL TIMES AND SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH TRAFFIC AND BUSINESS.
24. CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES AND MAY BE REQUIRED TO CUT TEMPORARY DRAINAGE TRENCHES IN SHOULDER AS DIRECTED BY THE PROJECT ENGINEER. ANY MATERIAL DEPOSITED IN ANY DRAINAGE FEATURE (DITCHES, CROSS DRAINS, ETC.) DURING CONSTRUCTION SHALL BE CLEANED OUT BEFORE FINAL ACCEPTANCE BY THE CONTRACTOR.
25. RAISED PAVEMENT MARKERS SHALL BE PLACED AS DIRECTED BY THE PROJECT ENGINEER. COST SHALL BE INCLUDED IN PRICE BID FOR ITEM NO. 731-02-00100.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND VERIFYING ALL MEASUREMENTS AND GRADES PRIOR TO BEGINNING OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE PROJECT CENTERLINE AND ANY NECESSARY TEMPORARY BENCH MARKS FOR CONSTRUCTION PURPOSES BEFORE DESTROYING EXISTINGMONUMENTS/NAILS/CROSS CUTS, ETC.
27. THE CONTRACTOR SHALL BE RESPONSIBLE TO ESTABLISH GRADES TO ASCERTAIN POSITIVE DRAINAGE TO THE NEAREST CATCH BASINS OR DROP INLETS WITHOUT HOLDING WATER IN ROADWAYS.

CONCRETE ROADWAY

1. ALL CONCRETE ROADWAY DIRECTLY AFFECTED BY CONSTRUCTION OR DAMAGED AS THE RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REMOVED AND REPLACED FROM JOINT TO JOINT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER AND APPROVED BY ST BERNARD PARISH.
2. TRANSVERSE (EXPANSION OR CONTRACTION) LONGITUDINAL AND CONSTRUCTION JOINTS SHALL ALL BE INSTALLED IN ACCORDANCE WITH ST. BERNARD PARISH STANDARDS. IN CASES WHERE THE SECTION OF ROADWAY TO BE RESTORED ABUTS AN EXISTING ROADWAY, ALL TRANSVERSE AND LONGITUDINAL JOINTS SHALL LINE UP AND BE OF THE SAME TYPE AS THE EXISTING JOINTS (EXPANSION, CONTRACTION, ETC.) AND, IN ADDITION, INCLUDE THE MINIMUM NUMBER AND SPACING OF EXPANSION JOINTS SHOWN IN THE STANDARDS.
3. PRIOR TO RESTORATION OF THE ROADWAY, THE ENGINEER SHALL FORWARD TO THE PARISH ENGINEER A CONCRETE MIX SUBMITTAL PREPARED BY A REPUTABLE TESTING LABORATORY FOR APPROVAL.
4. THE THICKNESS OF THE CONCRETE PAVEMENT IS AS SHOWN IN THE CONCRETE PAVEMENT DETAIL.
5. THE FINAL ROADWAY SHALL HAVE 'BURLAP SACK/DRAG FINISH' AS STIPULATED UNDER LOUISIANA "STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES" LATEST EDITION.
6. DENSITY TESTS WILL BE REQUIRED FOR ALL ROADWAY BASE MATERIALS WHERE REQUIRED IN THE CONTRACT. THE CONTRACTOR SHALL NOT BE ALLOWED TO RESTORE THE ROADWAY UNTIL ALL DENSITY TESTS HAVE BEEN COMPLETED AND THE RESULTS MEET DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.
7. THE CONTRACTOR SHALL GIVE A MINIMUM NOTICE OF 24 HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) TO THE ENGINEER AND THE ASSIGNED TESTING LABORATORY PRIOR TO THE POURING OF ANY CONCRETE FOR ROADWAY RESTORATION.
8. CONCRETE REQUIREMENTS - SEE TECH. SPECIFICATIONS
9. THE PAVEMENT SHALL NOT BE OPENED TO TRAFFIC UNTIL A COMPRESSIVE STRENGTH OF 4,000 PSI IS ATTAINED. IN NO CASE SHALL THE PAVEMENT BE OPENED TO TRAFFIC WITHIN A THREE (3) DAY PERIOD AFTER THE CONCRETE HAS BEEN PLACED.
10. DENSITY REQUIREMENTS (STANDARD PROCTOR)
    A. BASE COURSE (SAND) - 97%
    B. BASE COURSE (STONE) - 95%
    C. SUB-BASE (SAND) - 97%
11. TESTING REQUIREMENTS: (SUBJECT TO ADJUSTMENT BY ENGINEER)
    A. ONE BASE THICKNESS VERIFICATION PER EACH PATCH LOCATION (FULL WIDTH ROADWAY REPAIR WILL BE CONSIDERED TWO PATCH LOCATIONS IF WORK IS PERFORMED IN TWO CONSTRUCTION STAGES)
    B. ONE DENSITY TEST ON SUB-BASE (IF APPLICABLE) AND BASE MATERIAL PER EACH PATCH LOCATION. (FULL WIDTH ROADWAY REPAIR WILL BE CONSIDERED TWO PATCH LOCATIONS IF WORK IS PERFORMED IN TWO CONSTRUCTION STAGES)
    C. ONE SLUMP TEST MINIMUM PER 50 CUBIC YARDS OF CONCRETE OR FRACTION THEREOF.
    D. THREE (3) CYLINDERS MINIMUM PER 50 CUBIC YARDS OF CONCRETE OR FRACTION THEREOF.

    ADDITIONAL DENSITIES, SLUMP, CYLINDERS, CORES, ETC., WILL BE REQUIRED FOR ISOLATED AREAS.
    ENGINEER MAY ORDER FURTHER TESTING TO VERIFY THICKNESS, OR AS A RESULT OF A FAILED TEST.
    ANY "FAILED" FIELD TEST MUST BE RETESTED AND THE COSTS ASSOCIATED WITH THE "FAILED" TEST ARE THE RESPONSIBILITY OF THE CONTRACTOR.
12. ALL CONCRETE PAVEMENT INSTALLED WITH THIS PROJECT SHALL BE CONSTRUCTED TO INSURE POSITIVE DRAINAGE TO EXISTING & PROPOSED CATCH BASINS.
13. THERE SHALL BE NO COST ADJUSTMENT OR ACCEPTANCE FOR PAVEMENT THICKNESS DEFICIENCIES. IF THE CONCRETE CORE IS LESS THAN SPECIFIED, TWO ADDITIONAL CORES ON THE SAME SLAB WITHIN A 5' RADIUS MUST BE TAKEN. IF ONE OF THESE CORES IS LESS THAN SPECIFIED, THEN THE ENTIRE PANEL (JOINT TO JOINT) MUST BE REMOVED AND ADDITIONAL CORES ON OTHER PANELS POURED WITHIN THE SAME TIME FRAME MUST BE TAKEN.
14. ALL CONSTRUCTION MATERIAL AND PROCEDURES SHALL CONFORM TO THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES LATEST EDITION UNLESS OTHERWISE SPECIFIED. DEVIATIONS FROM THESE SPECIFICATIONS SHALL HAVE TO BE APPROVED BY PARISH ENGINEER
15. ALL STRUCTURES WITHIN THE PAVEMENT AREA SHALL BE ISOLATED (BOXED OUT) BY MEANS OF AN APPROVED CIRCULAR, SQUARE OR RECTANGULAR JOINT AROUND THEM.
16. WHENEVER NEW PAVING INTERSECTS OR MEETS EXISTING PAVING THAT IS TO REMAIN, THE GRADES OF THE NEW PAVING SURFACE SHALL MATCH THE GRADE OF THE EXISTING PAVING.

WATER DISTRIBUTION SYSTEM:

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, MATERIALS, EQUIPMENT, SERVICES AND PERMITS NECESSARY TO CONSTRUCT THE WATER DISTRIBUTION SYSTEM AS SHOWN ON THE PLANS.

2. PRIOR TO SUBMITTING A BID THE CONTRACTOR SHALL OBTAIN THE REQUIREMENTS OF THE WATER AUTHORITY (ST BERNARD PARISH), WORK IS TO BE PERFORMED AND, INCLUDE THE COSTS OF THESE REQUIREMENTS IN THE PRICE BID FOR THE WORK. THE TYPE OF MATERIALS AND THE MANUFACTURER'S BRAND OF PIPE, VALVES, HYDRANTS, ETC., REQUIRED BY THE WATER AUTHORITY WILL BE USED, WHENEVER, THE REQUIREMENTS OF THE WATER AUTHORITY ARE MORE STRINGENT THAN THESE SPECIFICATIONS, THEY WILL BE FOLLOWED.

3. INCLUDED IN THE WORK SHALL BE A COMPLETE DISTRIBUTION SYSTEM INCLUDING ALL FITTINGS, VALVES, TIE-INS, CONNECTIONS, THRUST BLOCKS, CHLORINATION AND, PRESSURE TESTING. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL OF THE FITTINGS AND LENGTHS OF PIPE NECESSARY TO AVOID CONFLICTS WITH OTHER UTILITIES AND, STRUCTURES.

4. WATER MAINS TO BE POLYVINYL CHLORIDE GASKET JOINT CLASS 150 (C-900) WITH "FLUID TITE" COUPLINGS CONFORMING TO ASTM D1784, RUBBER GASKETS TO BE ASTM D1869, UNLESS OTHERWISE NOTED ON PLANS. ALL POLYETHYLENE(PE) PLASTIC TUBING 3/4" THROUGH 2" SHALL BE PS 3408 CONFORMING TO ASTM D2737. USE APPROPRIATE BRASS FITTINGS FOR CONNECTIONS.

5. FITTINGS SHALL BE MANUFACTURED BY AND/OR RECOMMENDED FOR USE ON THE PIPE BY THE PIPE MANUFACTURER.

6. USE NECESSARY FITTINGS TO AVOID CONFLICTS WITH OTHER UTILITIES.

7. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" PLAN SHOWING THE LOCATION OF ALL VALVES , HYDRANTS, TEES, BENDS, ETC., AND, DISTANCES BETWEEN AND TO THE BUILDINGS LINES.

8. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES.

9. THE CONTRACTOR SHALL USE APPROVED 8" FITTINGS TO PROVIDE 18" VERTICAL CLEARANCE AND 6' HORIZONTAL CLEARANCE BETWEEN SEWER AND WATER LINES.SEWER LINE SHALL BE LOWER IN ELEVATION THAN WATER LINE.

10. THE WATER LINES SHALL PASS A HYDROSTATIC PRESSURE TEST OF 100 PSI FOR ONE HOUR AND LEAKAGE SHALL NOT EXCEED 20 GALLONS/DAY/MILE/IN. DIAMETER OF PIPE. ST BERNARD PARISH REPRESENTATIVES SHALL BE PRESENT FOR TESTING AND CHLORINATION. THE CONTRACTOR SHALL PROVIDE THE EQUIPMENT NECESSARY FOR THE PRESSURE TEST. TEST SHALL BE REVIEWED BY INDEPENDENT TESTING LAB.

11. ALL CUTS UNDER STREETS TO BE BACK-FILLED WITH SAND OR OTHER SUITABLE MATERIAL APPROVED BY ENGINEER AND COMPACTED TO 97% STD. PROCTOR, PRIOR TO REPAVING.

12. ALL WATER LINES ARE TO BE STERILIZED IN ACCORDANCE WITH AWWA STD C-601 AND APPROVED BY THE LOUISIANA DEPARTMENT OF HEALTH AND HOSPITAL BEFORE BEING PLACED IN SERVICE.

13. CONTRACTOR SHALL INSTALL A PLASTIC BONDED SOLID 16 GAUGE COPPER WIRE ON THE TOP OF ALL NEWLY CONSTRUCTED WATER MAINS. THE WIRE IS TO BE CONTINUOUS ALONG THE ENTIRE LENGTH OF THE PIPE AND GROUNDED TO GATE VALVES, FIRE HYDRANTS OR FLUSHING VALVES. ADDITIONALLY, BLUE, 2" WARNING TAPE SHALL BE PLACED 12 INCHES OVER AND ABOVE ALL WATER LINES.

14. ALL TRENCHES UNDER EXISTING OR PROPOSED ROADS SHALL BE COMPACTED TO 97% (ASTM D-698). THE MAXIMUM WIDTH OF TRENCH SHALL NOT EXCEED THE OUTSIDE DIAMETER OF THE PIPE TO BE LAID PLUS TWO (2') FEET.

15. ALL VALVES SHALL HAVE A THREE PIECE CAST IRON VALVE BOX INSTALLED AND ADJUSTED TO FINISH GRADE. VALVE BOXES SHALL BE MANUFACTURED BY TYLER CORPORATION, SERIES 6850 OR APPROVED EQUAL.

16. EACH VALVE BOX SHALL HAVE A 24" SQUARE OR 24" ROUND BY 4" THICK CONCRETE PAD, EITHER POURED IN PLACE OR PREFABRICATED AND PLACED. PREFABRICATED PADS MUST BE BY SOUTHERN METER BOX, INC., ALEXANDRIA, LOUISIANA OR APPROVED EQUAL.

17. ALL GATE VALVES 3" OR LARGER SHALL CONFORM WITH AWWA C-509-94, RESILIENT-SEATED GATE VALVES WITH 200 PSI WORKING PRESSURE FOR WATER SUPPLY SERVICE. GATE VALVES SHALL BE STAINLESS STEEL MUELLER SERIES 2360. TAPPING SLEEVES FOR PVC, AC, AND DI SHALL BE STAINLESS STEEL WITH A STAINLESS STEEL FLANGE AS MANUFACTURED BY MUELLER, CLOW, M&H OR KENNEDY.

18. ALL MATERIALS NOT LIMITED TO SADDLES, BRASS FITTINGS, STOPS, VALVES, AND HYDRANTS SHALL BE MANUFACTURED BY MUELLER.

19. ALL FIRE HYDRANTS SHALL BE OF A TYPE AS APPROVED BY THE WATER SYSTEM'S UTILITY COMPANY AND/OR AS APPROVED BY THE LOCAL FIRE DISTRICT. THE CONTRACTOR TO CONFIRM TYPE PRIOR TO INSTALLATION. IF NONE IS SPECIFIED, THEN FIRE HYDRANTS TO BE MUELLER SUPER CENTURION 250/HS, MEETING AWWA C-502-94.

20. HYDRANTS SHALL BE OF HIGH SECURITY WITH INTEGRAL CHECK VALVE AS MANUFACTURED BY MUELLER. FIRE HYDRANT SHALL BE MARKED WITH A BLUE REFLECTOR IN THE CENTER OF THE STREET.

21. ALL FIRE HYDRANTS SHALL HAVE AT LEAST THREE OUTLETS PER HYDRANT; ONE SHALL BE A STREAMER CONNECTION TO ALLOW FIRE APPARATUS TO PROVIDE WATER FROM HYDRANT TO THE APPARATUS AND THERE SHALL BE AT LEAST TWO 2.5 INCH OUTLETS WITH NATIONAL STANDARD THREADS.

22. CONTRACTOR IS RESPONSIBLE FOR THE COST OF ALL TESTING AND CHLORINATION ASSOCIATED WITH VERIFYING THAT CONSTRUCTION IS IN COMPLIANCE WITH PLANS AND SPECIFICATIONS.

23. A 4" PVC SCHEDULE 40 PIPE SHALL BE LAID UNDER ALL NEW STREETS THAT DO NOT HAVE WATER LINES ON EACH SIDE OF THE ROAD. THE PIPE SHALL BE LINED UP WITH EACH PROPERTY LINE ON THE OPPOSITE SIDE OF THE ROAD FROM THE WATER LINE. THE PIPE SHALL BE BETWEEN 18" TO 24" IN DEPTH AND SHALL EXTEND OUTWARD 12" PAST THE OUTER EDGE OF THE COMPACTED SUB-BASE AND SHALL BE CAPPED ON EACH END. SHALL BE MARKED BY IMPRESSING LETTER W IN THE FACE OF THE STREET CURB, EDGE OF THE STREET, OR MARKED WITH AN APPROVED MARKER.

24. CONTRACTOR SHALL MAKE THE TAP TO THE EXISTING WATER MAIN WITH REPRESENTATIVE OF WATER DEPT. PRESENT.

25. THREE JOINTS OF PIPE SHALL BE RESTRAINED AT FITTINGS AND DEAD ENDS WITH PIPE TO PIPE AND PIPE TO FITTING RESTRAINTS.

26. ALL PLUGS, DEAD ENDS, TEES, CROSSES, BENDS, AND HYDRANT TEES SHALL BE RESTRAINED WITH SOCKET CLAMPS, 3/4" STAINLESS STEEL RODS, OR RESTRAINED FITTINGS FOR AT LEAST 60' ON EITHER SIDE OF THE FITTING, AND INSTALLED WITH ADEQUATE THRUST BLOCKING.

27. ALL FIRE HYDRANTS SHALL BE INSTEAD ON THE PROJECTION OF THE PROPERTY LINE AND WITHIN THE ROAD RIGHT OF WAY. FIRE CONNECTIONS TO THE MAIN SHALL BE CONFIGURED WITH A TEE ON THE MAIN WITH A 6" FLANGED CONNECTION, FLANGED ISOLATION VALVE, AND A FLANGED HYDRANT. FIRE HYDRANT SPACING SHALL BE 400'OR AS REQUIRED/APPROVED BY THE PARISH FIRE DEPARTMENT.

DRAINAGE NOTES:

1. PLASTIC PIPE SHALL BE RIBBED POLYVINYL CHLORIDE CULVERT PIPE AND SHALL CONFORM TO ASTM F794, SERIES 46. ONLY PIPE ON THE STATE OF LOUISIANA QUALIFIED PRODUCTS LIST 66 WILL BE PERMITTED WITH TYPE 3 JOINTS.

2. ALL PIPE JOINTS SHALL BE WRAPPED WITH A 36" WIDE PIECE OF PLASTIC FILTER CLOTH (LA D.O.T.D. SPECIFICATIONS FOR ROADS AND BRIDGES 2016 EDITION, SECTION 1019) CENTERED ON THE JOINT AND LAPPED 36".

3. TRENCHES WITHIN STREET RIGHT-OF-WAY SHALL BE BACKFILLED WITH PUMPED RIVER SAND. OTHER TRENCHES MAY BE BACKFILLED WITH SELECT MATERIAL FROM EXCAVATION.

4. DRAIN DITCHES CROSSING THE RIGHT-OF-WAY SHALL BE MUCKED OUT (MINIMUM OF 24") OR UNTIL GOOD SOIL IS REACHED WHICHEVER IS GREATER AND FILLED WITH PUMPED RIVER SAND. WHERE DITCHES CROSS THE LOTS, IT SHALL BE MUCKED OUT AND FILLED WITH SELECT MATERIAL AND MATERIAL FROM EXCAVATION.

5. THE CONTRACTOR SHALL PREPARE AND FURNISH THE ENGINEER WITH AN AS-BUILT DRAINAGE PLAN SHOWING STREET GRADES. ALL STRUCTURES MUST BE LOCATED BY STATIONS TIED TO A KNOWN POINT SUCH AS A PROPERTY CORNER OR CROSSES AT CENTERLINE OF THE STREETS. CONTRACTOR MUST OBTAIN TOP OF CASTING ELEVATIONS AND INVERTS OF ALL DRAINAGE STRUCTURES.

6. CONTRACTOR TO USE PROPER PIPE PULLER DEVICES (MECHANICAL DEVICE) FOR TIGHTENING JOINTS FOR 36" DIAMETER RCP AND LARGER.

7. BEDDING FOR ALL DRAIN PIPE SHALL CONFORM TO THE PIPE MANUFACTURER'S REQUIREMENTS.

8. BACKFILL MATERIAL SHALL BE THOROUGHLY COMPACTED UNDER HAUNCHES AND THEN COMPACTED IN LAYERS NOT EXCEEDING 12 INCHES COMPACTED THICKNESS. EACH LAYER SHALL BE COMPACTED BY APPROVED METHODS TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY PRIOR TO PLACEMENT OF A SUBSEQUENT LAYER. EXPOSED SLOPES AT THE CONDUIT ENDS SHALL BE COVERED BY AT LEAST 6 INCHES COMPACTED THICKNESS OF PLASTIC SOIL BLANKET.

9. A DENSITY TEST WILL BE REQUIRED AT 200 FEET INTERVALS, PER LAYER, ALONG A CONTINUOUS DRAIN LINE THAT MAY VARY IN SIZE, ALTERNATING FROM ONE SIDE OF THE PIPE TO THE OTHER. FOR PIPE LENGTHS LESS THAN 200 FEET, ONE TEST WILL BE REQUIRED PER LAYER.

10. PVC DRAIN PIPES BENEATH PROPOSED ROADWAYS SHALL HAVE A MINIMUM DEPTH OF COVER OF TWO (2) FEET DURING CONSTRUCTION. MATERIAL SHALL BE ADDED AS REQUIRED TO MAINTAIN THE MINIMUM 2 FEET OF COVER PRIOR TO PLACEMENT OF CONCRETE.

11. THE MINIMUM DEPTH OF COVER BENEATH PAVEMENT SHALL BE ONE (1) FOOT AT THE COMPLETION OF CONSTRUCTION. COVER FOR PIPE BENEATH PAVEMENT SHALL BE MEASURED FROM THE TOP OF PIPE TO THE BOTTOM OF CONCRETE. THE MINIMUM DEPTH OF COVER FOR PIPE LOCATED BEHIND BACK OF CURB SHALL BE 24 INCHES.

12. THE PARISH RESERVES THE RIGHT AT ANY TIME DURING CONSTRUCTION TO EXCAVATE, AT THE PARISH'S EXPENSE, ANY SECTION OF PIPE TO MONITOR COMPLIANCE WITH MANUFACTURER'S BEDDING REQUIREMENTS. SHOULD THE EXPOSED PIPE REVEAL IMPROPER BEDDING, THE ENTIRE JOB OR A PORTION THEREOF AT THE DIRECTOR'S DISCRETION SHALL BE EXCAVATED AT THE OWNER'S EXPENSE AND ANY DIFFERENCES CORRECTED.

13. NO SOONER THAN 30 DAYS AFTER INSTALLATION OF PVC PIPE, A FIVE DEFLECTION TEST SHALL BE REQUIRED. THE DEVELOPER MUST PAY THE TESTING FEE FOR THE LABORATORIES SELECTED BY THE PARISH. ANY PIPE SECTION THAT FAILS THE TEST WILL HAVE TO BE EXCAVATED AND REINSTALLED WITH PROPER BEDDING.

14. COPIES OF ALL TESTING REPORTS SHALL BE FORWARDED TO THE ST BERNARD PARISH DEPARTMENT OF PUBLIC WORKS.

15. PROPOSED PLASTIC PIPE (RIBBED) FOR DRAIN TIE-IN SHALL USE ONE STANDARD DOUBLE GASKET, POSITIONED ON THE PIPE IN THE CENTER OF THE MANHOLE WALL.

16. CORRUGATED METAL PIPE SHALL CONFORM TO LADOTD SPECIFICATIONS.

17. 21-INCH OR SMALLER DIAMETER SHALL HAVE 14 GAUGE THICKNESS AND 24-INCH OR LARGER DIAMETER SHALL HAVE 12 GAUGE THICKNESS.

DRIVEWAYS AND SIDEWALKS

1. ALL DRIVEWAYS REMOVED SHALL BE REPLACED IN KIND UNLESS OTHERWISE NOTED.
2. THE EXACT LIMITS OF REMOVAL AND REPLACEMENT OF DRIVEWAYS (CONCRETE, ASPHALT, BRICK, STONE, SLATE, ETC.) SHALL BE DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL NOT REMOVE ANY DRIVEWAY WITHOUT PRIOR APPROVAL OF THE ENGINEER.
3. THE CONTRACTOR IS REQUIRED TO SAW CUT (FULL DEPTH) SIDEWALKS, DRIVEWAYS, CONCRETE AND ASPHALT PAVEMENT OR OTHER CONSTRUCTION AREAS TO INSURE A STRAIGHT LINE BETWEEN OLD AND NEW WORK.
4. ALL SIDEWALKS AND DRIVEWAYS (CONCRETE, BRICK, STONE, SLATE, ETC.) DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER ARE OUTSIDE THE LIMITS OF THE ROADWAY CONSTRUCTION, SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
5. THE CONTRACTOR SHALL ADJUST THE ELEVATIONS OF THE NEW SIDEWALKS SO AS TO ALLOW DRAINAGE AWAY FROM THE PROPERTY AT ALL TIMES. SIDEWALK ELEVATIONS MAY BE ADJUSTED TO ALLOW DRAINAGE THROUGH DRIVEWAYS WITH DEPRESSED CURBS.
6. TESTING REQUIREMENTS FOR DRIVEWAYS, SIDEWALKS, AND HANDICAPPED RAMPS SHALL FOLLOW THE SPECIFICATIONS PROVIDED WITH THIS PROJECT.

HORTICULTURE REQUIREMENTS

1. ALL TREE REMOVALS, BRANCH PRUNING OR ROOT CUTTING SHALL BE PERFORMED BY A LOUISIANA LICENSED ARBORIST, APPROVED BY ST BERNARD PARISH. AN URBAN FORESTER PERMIT SHALL BE OBTAINED BY THE CONTRACTOR.

2. ALL EXISTING TREES, SHRUBS, AND VEGETATION DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN KIND OR REPAIRED AT NO DIRECT PAY.

3. ALL TREES EXCEPT THOSE ON RIGHT-OF-WAY GREEN SPACE NEAR ANY EXCAVATION OR CONSTRUCTION OF ANY BUILDING, STRUCTURE, OR STREET WORK, SHALL BE GUARDED WITH A GOOD SUBSTANTIAL FENCE, FRAME, OR BOX. THE "CONSTRUCTION TREE GUARD" SHALL BE NOT LESS THAN FOUR (4) FEET HIGH AND EIGHT (8) FEET SQUARE, OR AT A DISTANCE IN FEET FROM THE TREE TRUNK EQUAL TO THE DIAMETER OF THE TRUNK AT BREAST HEIGHT (DBH) IN INCHES, WHICHEVER IS GREATER. ALL BUILDING MATERIAL, DIRT, OR OTHER DEBRIS SHALL BE KEPT OUTSIDE THE CONSTRUCTION TREE GUARD.

4. ALL DISTURBED GRASS AREAS SHALL BE REPLACED WITH SOD TO MATCH THE EXISTING.

PAVING NOTES:

1. UNLESS OTHERWISE SHOWN, ALL PAVEMENT SHALL MEASURE 26' BACK TO BACK OF CURB AND SHALL BE 7" THICK MINIMUM VERIFIED BY STAGGERED CORES TAKEN AT A MAXIMUM OF 200' INTERVAL.
2. PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH SECTIONS 601 & 901 OF THE DOTD STANDARD SPECIFICATION FOR ROADS AND BRIDGES (LATEST EDITION) AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
3. IMMEDIATELY AFTER COMPLETION OF FINISHING OPERATIONS AND AS SOON AS MARRING OF CONCRETE WILL NOT OCCUR, THE PAVEMENT SURFACE SHALL BE CURED BY COVERING WITH A WHITE PIGMENT CURING COMPOUND IN CONFORMANCE WITH DOTD STANDARD SPECIFICATION FOR ROADS AND BRIDGES LATEST EDITION.
4. CONTRACTOR SHALL USE THE NECESSARY SAND BASE TO BRING THE ROADWAY GRADES SHOWN ON THE PLANS. THIS MAY REQUIRE MORE THAN THE MINIMUM SAND BASE.
5. JOINT SEALER SHALL BE IN ACCORDANCE WITH SECTION 1005.02 OF DOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 200 EDITION. THE SEALANT AND BACKER MATERIAL SHALL BE APPROVED PRODUCT LISTED IN DOTD'S QUALIFIED PRODUCT LIST.

ASPHALT ROADWAY

1. SAW CUTTING USING A CONCRETE CUTTING TYPE SAW TO MAKE A TRUE STRAIGHT LINE FULL DEPTH SHALL BE REQUIRED ALONG THE ENTIRE LIMITS OF THE AFFECTED AREA OF REMOVAL, UNLESS OTHER METHODS ARE AUTHORIZED BY THE PARISH ENGINEER.
2. REQUIREMENT 3 SPECIFIED UNDER CONCRETE ROADWAY SHALL ALSO APPLY FOR ASPHALT.
3. JOB MIX FORMULA, PG 70-22M (LEVEL 1), PER LA DOTD STANDARDS, 2016 EDITION
4. ALL CONSTRUCTION MATERIALS, PROCEDURES, TESTING, FINISHING, ETC., SHALL CONFORM TO THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES (2016) LATEST EDITION. DEVIATIONS FROM THESE SPECIFICATIONS SHALL HAVE TO BE APPROVED BY THE PARISH ENGINEER.
5. DENSITY REQUIREMENTS (STANDARD PROCTOR)
   A. BASE COURSE (SAND) - 97%
   B. BASE COURSE (STONE) - 95%
   C. SUB-BASE (SAND) - 97%
6. TESTING REQUIREMENTS: (SUBJECT TO ADJUSTMENT BY ENGINEER)
   A. ONE BASE THICKNESS VERIFICATION PER EACH PATCH LOCATION (FULL WIDTH ROADWAY REPAIR WILL BE CONSIDERED TWO PATCH LOCATIONS IF WORK IS PERFORMED IN TWO CONSTRUCTION STAGES)
   B. ONE DENSITY TEST ON SUB-BASE (IF APPLICABLE) AND BASE MATERIAL PER EACH PATCH LOCATION. (FULL WIDTH ROADWAY REPAIR WILL BE CONSIDERED TWO PATCH LOCATIONS IF WORK IS PERFORMED IN TWO CONSTRUCTION STAGES)
   C. ALL ASPHALT PLANT TESTING TO BE PERFORMED AT THE DIRECTION OF ENGINEER, IN AGREEMENT WITH ST. BERNARD PARISH.

   ADDITIONAL DENSITIES, CORES, ETC., WILL BE REQUIRED FOR ISOLATED AREAS.
   ENGINEER MAY ORDER FURTHER TESTING TO VERIFY THICKNESS, OR AS A RESULT OF A FAILED TEST.
   ANY "FAILED" FIELD TEST MUST BE RETESTED AND THE COSTS ASSOCIATED WITH THE "FAILED" TEST ARE THE RESPONSIBILITY OF THE CONTRACTOR.
7. ALL ASPHALT PAVEMENT INSTALLED WITH THIS PROJECT SHALL BE CONSTRUCTED TO INSURE POSITIVE DRAINAGE TO EXISTING & PROPOSED CATCH BASINS.
8. WHEN REMOVAL OF EXISTING PAVEMENT SURFACING IS REQUIRED IN CONJUNCTION WITH PROPOSED PROFILE GRADE LINE SHOWN ON THE DRAWINGS,THE EXISTING ASPHALT CONCRETE PAVEMENT IMMEDIATELY ADJACENT TO THE EDGE OF THE CONCRETE GUTTER SHALL BE MILLED TO A MINIMUM DEPTH OF ONE (1") TO OBTAIN A SMOOTH TIE-IN BETWEEN EXISTING AND PROPOSED CONSTRUCTION.
9. WHEN ADDITIONAL PAVEMENT SURFACING MATERIAL IS REQUIRED, THE ADJACENT CONCRETE GUTTER BOTTOM WILL NOT BE COVERED WITH ASPHALT SURFACING IF THE PROPOSED PROFILE GRADE LINE SHOWN ON THE DRAWINGS IS WITHIN ONE (1") INCH. IN AREAS WHERE THE PROPOSED PROFILE GRADE LINE IS HIGHER THAN THE EXISTING GUTTER BOTTOM BY MORE THAN ONE (1") INCH THE SURFACE OF THE EXISTING GUTTER BOTTOM OR ROLLING STRIP SHALL BE OVERLAID WITH ASPHALT SURFACING TO THE FACE OF THE CURB.
10. THE TYPE, SIZE AND LOADINGS OF EQUIPMENT USED DURING THE MILLING AND OVERLAY OPERATIONS MAY BE LIMITED AT THE DISCRETION OF THE PROJECT ENGINEER.

SEWER NOTES:

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, MATERIALS, EQUIPMENT, SERVICES AND, PERMITS NECESSARY TO CONSTRUCT THE SEWER DISTRIBUTION SYSTEM AS SHOWN ON THE PLANS.
2. THE SLOPE OF ALL SEWER MAINS TO BE A MINIMUM OF 0.004 FT./FT., OR AS OTHERWISE SHOWN ON PLAN.
3. PRE-CAST CONCRETE MANHOLES (ASTM A48, CLASS 20) MAY BE USED AS APPROVED BY THE ENGINEER. ZYPEX ADDITIVE SHALL BE INCLUDED IN MIX.
4. EXFILTRATION SHALL NOT EXCEED 15 GAL./IN. DIA./MILE PIPE/24 HOUR PERIOD.
5. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH AN "AS-BUILT" PLAN SHOWING THE DISTANCE FROM THE NEAREST MANHOLE TO EACH HOUSE CONNECTION, DEPTH OF MANHOLE, ETC.- DISTANCE OF HC FROM DOWNSTREAM MANHOLES. THIS DISTANCE SHALL BE MEASURED ALONG THE CENTERLINE OF THE MAIN AND SHALL BE EQUAL TO THE DISTANCE FROM THE CENTER OF THE DOWNSTREAM MANHOLE TO THE PROJECTION POINT OF EACH HC (HC AT PROPERTY LINE) ONTO THE MAIN.
   - ELEVATION OF SERVICE CONNECTIONS AT THE PROPERTY LINE.
   - THE INVERT AND TOP OF CASTING ELEVATIONS AND DEPTHS OF EACH MANHOLE.
   - PIPE INVERTS AT MANHOLES.
   - THE CENTER TO CENTER DISTANCES OF CONSECUTIVE MANHOLES.
6. ALL CUTS UNDER DRIVEWAYS OR STREETS TO BE BACK-FILLED WITH SIMILAR MATERIAL AS EXISTING FOR THE DRIVE SURFACE, AND OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER AND COMPACTED TO 95% STD. PROCTOR. BORING BENEATH ROADWAYS IS AN ACCEPTABLE ALTERNATIVE. CONTRACTOR TO ASSUME ALL LIABILITY FOR STREET DAMAGE RESULTING FROM EXCAVATION OR BORING ACTIVITY AND SHALL REPAIR AND REPAVE ANY DAMAGE RESULTING FROM HIS CONSTRUCTION ACTIVITIES.
7. ALL SEWER PIPES SHALL BE CHECKED FOR ALIGNMENT.
8. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CONTROLLING THE STABILITY OF ALL EXCAVATIONS, AND PROVIDE SAFE WORKING CONDITIONS FOR HIS EMPLOYEES AND SUBCONTRACTORS.
9. THE CONTRACTOR SHALL USE TIMBER SHEETING OR TRENCH BOX, WHEN NECESSARY TO CONTROL THE WIDTH AND STABILITY OF EXCAVATION AND TO PROVIDE SAFE WORKING CONDITIONS FOR HIS WORKMEN. NO EXTRAS SHALL BE PAID FOR THIS ITEM.
10. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE CONFORMING TO ASTM A48. MANHOLE RISERS AND TOPS CONFORMING TO ASTM C-478 WITH JOINTS OF "RAM-NEK" PERFORMED PLASTIC ROPE AS MANUFACTURED BY K.T. SYNDER, HOUSTON, TEXAS OR ASTM C-443 RUBBER GASKET.
11. DROP SEWER MANHOLES SHALL BE INSTALLED WHEN THE VERTICAL DISTANCE FROM THE MANHOLE INVERT TO THE SEWER MAIN INVERT EXCEEDS THREE (3) FEET.
12. ALL MANHOLE TOPS SHALL BE CONSTRUCTED AT LEAST ONE FOOT ABOVE THE HIGHEST FLOODWATER ELEVATION. IF THIS IS NOT FEASIBLE, MANHOLE FRAME AND COVER TO BE WATER TIGHT SHALL BE EQUAL TO NEENAH FOUNDRY CO. R-1916-D.
13. ALL MANHOLE FRAMES, COVERS, AND STEPS SHALL BE ASPHALT COATED.
14. FORCE MAIN CONNECTIONS TO A PROPOSED MANHOLE 8' OR LESS IN DEPTH SHALL BE MADE FROM UNDERNEATH THROUGH THE BOTTOM CENTER OF THE MANHOLE. CONNECTIONS TO PROPOSED MANHOLES OVER 8' IN DEPTH AND TO EXISTING MANHOLES SHALL BE MADE THROUGH THE SIDE AT THE SPECIFIED ELEVATION.
15. SEWER PIPE SHALL BE PVC PIPE AND SHALL CONFORM TO ASTM D-3034. SDR 35 (THICK WALL EXTRA HEAVY SERIES.), OR APPROVED EQUAL. SEWER GRAVITY LINE SHALL BE GREEN IN COLOR. SEWER FORCE MAIN SHALL BE WHITE OR BLACK IN COLOR. FORCEMAIN SHALL BE C-900 OR HDPE DR 21 (PE 3408) AND CONFORM TO ASTM D-1248. FORCEMAIN SHALL BE MARKED WITH FIBERGLASS MARKER AT 1000 FOOT INTERVALS
16. THE CONTRACTOR IS RESPONSIBLE TO CHECK WITH THE UTILITY OWNER OR HIS REPRESENTATIVE FOR COORDINATION OF ALL TESTING NECESSARY TO SECURE APPROVAL FROM THE UTILITY OWNER FOR HIS WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF ALL TESTING ASSOCIATED WITH VERIFYING THAT CONSTRUCTION IS IN COMPLIANCE WITH PLANS AND SPECIFICATIONS.
17. SEWER SERVICE/HOUSE CONNECTIONS CONNECTED TO A TERMINAL MANHOLE SHALL BE CONNECTED AT THE INVERT OF THE TERMINAL MANHOLE.
18. SEWER AND WATER MAINS SHALL BE LAID IN SEPARATE TRENCHES NOT LESS THAN SIX (6') FEET APART HORIZONTALLY, WHEN INSTALLED IN PARALLEL. CROSSING WATER AND SEWER MAINS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18") INCHES. THE SEWER LINE SHALL BE LAID LOWER IN ELEVATION THAN THE WATER LINE.
19. STEPS WILL NOT BE INSTALLED UNLESS DIRECTED BY THIS UTILITY OPERATOR AND DETAILS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY WHEN DEEMED NEEDED BY THE UTILITY OPERATOR.
20. THE CONTRACTOR SHALL FURNISH A HOSE DOWN WATER LINE, MIN. 1" IN DIAMETER WITH HOSE BIB TO EACH SEWER LIFT STATION AND/ OR SEWER TREATMENT PLANT AREA.
21. IDENTIFICATION OR TRACER WIRE SHALL BE BURIED IN THE TRENCH ABOVE THE PIPE.
22. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES.
23. INFILTRATION SHALL NOT EXCEED 15 GAL./INCH OF DIAMETER/MILE OF PIPE/24 HOURS.
24. ALL LOTS MUST BE PROVIDED WITH A SEWER SERVICE/HOUSE CONNECTION (HC). SEWER HC, IF PRACTICAL, SHALL BE INSTALLED PERPENDICULAR TO THE SEWER MAIN. ALL SEWER HC INSTALLED BY THE CONTRACTOR SHALL BE PROPERLY PLUGGED. LOCATION OF ALL HC SHALL BE MARKED BY IMPRESSING LETTERS HC IN THE FACE OF THE STREET CURB, EDGE OF STREET, OR MARKED WITH AN APPROVED MARKER. END OF HC SHALL BE MARKED BY EXTEND THE 6" HC FROM CLEANOUT LOCATION VERTICALLY MIN.3' ABOVE GRADE AT THE END OF HC.
25. MANHOLE CONNECTIONS (CONNECTION OF SEWER PIPES TO MANHOLES) SHALL BE WATERTIGHT. CONNECTION OF PVC SEWER PIPE TO MANHOLES WITH CONCRETE GROUT, WITHOUT SOME FORM OF APPROVED MANHOLE CONNECTOR OR WATER STOP, SHALL NOT BE PERMITTED.
26. PROVIDE RESTRAINED JOINT FITTINGS ON ALL FORCE MAIN JOINTS WITHIN 20' OF ANY BENDS F0R PVC OR DUCTILE IRON PIPE.
27. SEWER GRAVITY LINES SHALL INCLUDE GEOTEXTILE FABRIC WRAPPED AROUND 6" LIMESTONE BEDDING.

PROJECT NAME :

PROJECT NUMBER:

DATE	08.07.2019
DRAWN BY	MF/AR
SCALE:	VARIES
FILENAME: S:\Public Works Shared\St. Bernard Standard Road Details	

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
GENERAL NOTES

APPROVED BY

DATE

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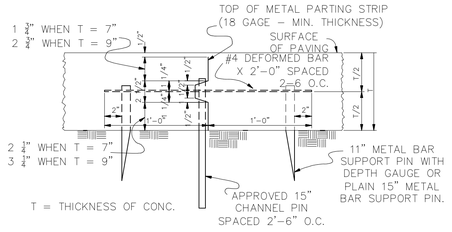
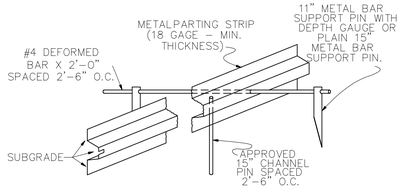
DRAWING NUMBER
SD - 1
SHEET 1 OF 21

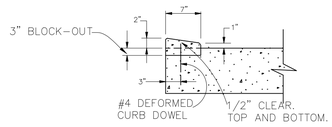


DEFORMED LONGITUDINAL JOINT
(ALSO CALLED METAL KEYED JOINT)
N.T.S.

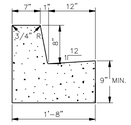


OBLIQUE VIEW METAL PARTING STRIP
FOR DEFORMED LONGITUDINAL JOINT
N.T.S.

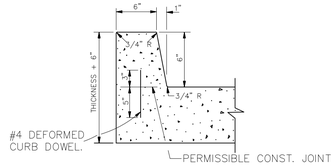
NOTE: ALL JOINTS FOR CONCRETE PAVEMENT SHOWN IN LA. D.O.T.D. STANDARD PLANS CP-01 CAN BE USED AT THE REQUEST OF THE ENGINEER WHO SHALL PROVIDE CONSTRUCTION DETAILS TO CONTRACTOR.



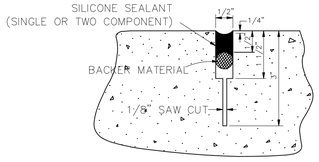
MODIFIED BARRIER CURB
N.T.S.



8" HIGH BARRIER TYPE
CONCRETE CURB & GUTTER
(ASPHALT PAVEMENT ROADWAY)
N.T.S.

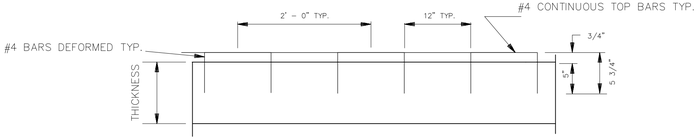


6" HIGH BARRIER
TYPE CONCRETE CURB.
(CONCRETE PAVEMENT ROADWAY)

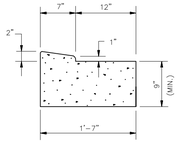


DETAIL "A"
N.T.S.

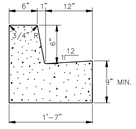
DETAILS "A" AND "B" ARE USED IN CONJUNCTION WITH TRANSVERSE DUMMY JOINT OR CONST. JOINT.



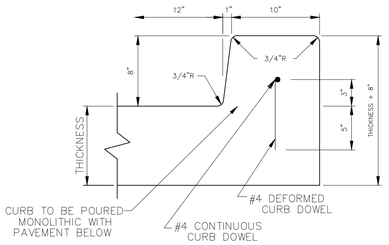
MODIFIED CURB DOWELS
(USED ON MODIFIED BARRIER CURB)
N.T.S.



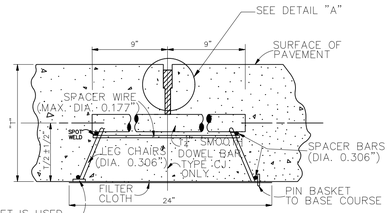
MODIFIED BARRIER
CURB AND GUTTER
N.T.S.



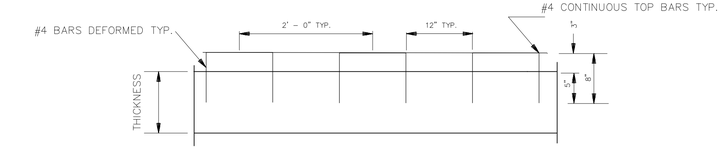
6" HIGH BARRIER TYPE
CONCRETE CURB & GUTTER
(ASPHALT PAVEMENT ROADWAY)
N.T.S.



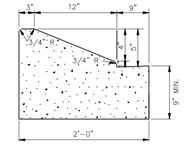
HEAVY DUTY BARRIER TYPE
CONCRETE CURB
NTS



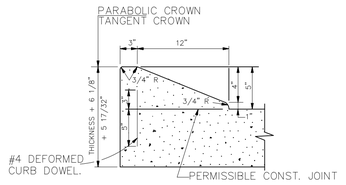
TYPE DJ OR CJ
(TRANSVERSE DUMMY JOINT OR CONSTRUCTION JOINT)
(SECTION "B–B")
N.T.S.



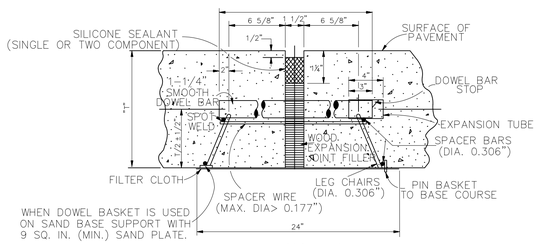
CURB DOWELS
N.T.S.



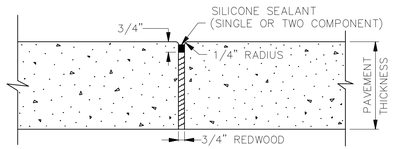
5" HIGH ROLLOVER TYPE
CONCRETE CURB & GUTTER
(ASPHALT PAVEMENT ROADWAY)
N.T.S.



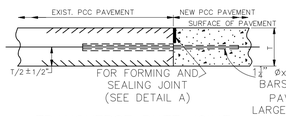
5" HIGH ROLLOVER
TYPE CONCRETE CURB
(CONCRETE PAVEMENT ROADWAY)
N.T.S.



TYPE EJ
(TRANSVERSE EXPANSION JOINT)
(SECTION "A–A")
N.T.S.

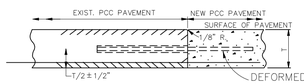


EXPANSION JOINT
(FOR CONCRETE SIDEWALK & RAMP FOR HANDICAPPED)
N.T.S.



TRANSVERSE BUTT JOINT
(APPLICABLE TO MAJOR STREETS)

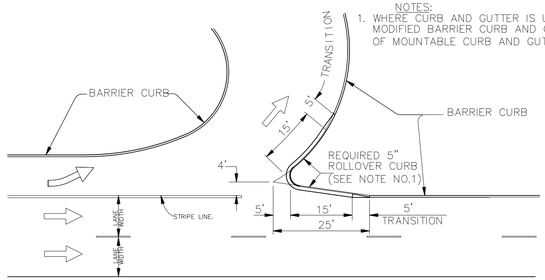
1/4" ø x 18" at 12" O.C. SMOOTH DOWEL BARS SHALL BE PLACED IN EXISTING PAVEMENT BY DRILLING HOLES 1/8" LARGER THAN ø OF THE TIE BAR TO A DEPTH OF 1/2 THE BAR LENGTH AND FILLING THE HOLES WITH EPOXY BEFORE INSERTION OF DOWEL BARS.



LONGITUDINAL BUTT JOINT
(APPLICABLE TO MAJOR STREETS)

DEFORMED TIE BARS 1/2" øX 24" AT 24" O.C. SHALL BE INSTALLED IN EXISTING PAVEMENT BY DRILLING HOLES 5/8" LARGER THAN ø OF THE TIE BAR TO A DEPTH OF 15". THE HOLES SHALL BE FILLED WITH EPOXY BEFORE INSERTION OF TIE BARS.

NOTES:
1. WHERE CURB AND GUTTER IS USED, CONSTRUCT MODIFIED BARRIER CURB AND GUTTER INSTEAD OF MOUNTABLE CURB AND GUTTER.



ROLLOVER CURB
IN THE GORE AREA
(U–TURN, LEFT TURN LANE OR ROADWAY SPLIT)
N.T.S.

PROJECT NAME :

PROJECT NUMBER:

DATE	09.05.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
ROADWAY DETAILS (1 OF 2)

APPROVED BY

DATE

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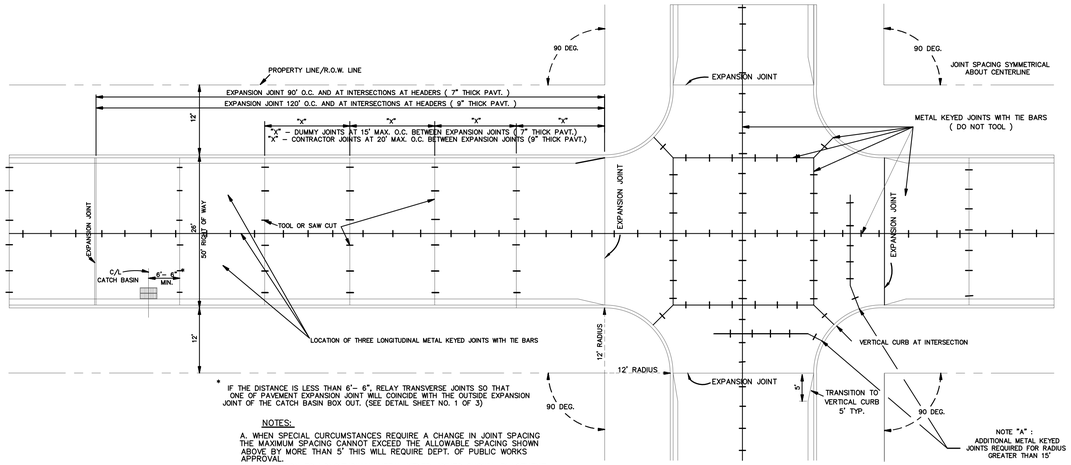
DRAWING NUMBER

SD - 2

SHEET 2 OF 16



NOTES:

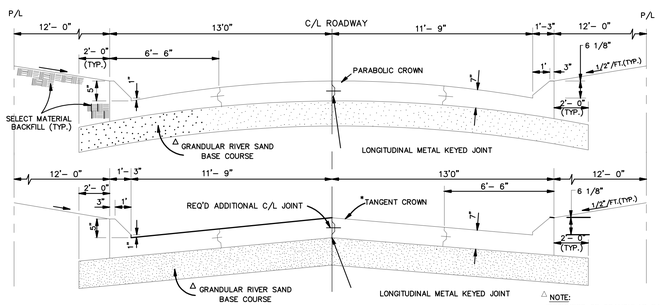
A. WHEN SPECIAL CURCUMSTANCES REQUIRE A CHANGE IN JOINT SPACING THE MAXIMUM SPACING CANNOT EXCEED THE ALLOWABLE SPACING SHOWN ABOVE BY MORE THAN 5' THIS WILL REQUIRE DEPT. OF PUBLIC WORKS APPROVAL.

B. IN ADDITION TO LONGITUDINAL METAL KEYED JOINTS SHOWN, PLACEMENT OF LONGITUDINAL METAL KEYED JOINTS WITH TIE BARS MAY BE REQUIRED AT CENTERLINE OF STREET IN AREAS WHERE DEPT. OF PUBLIC WORKS CONSIDERS SOIL CONDITIONS TO BE POOR.

TYPICAL JOINT SPACING AND INTERSECTION DETAILS FOR 90 DEG. INTERSECTIONS

(SHOWN FOR 26' STREET IN 50' R/W)

N.T.S.

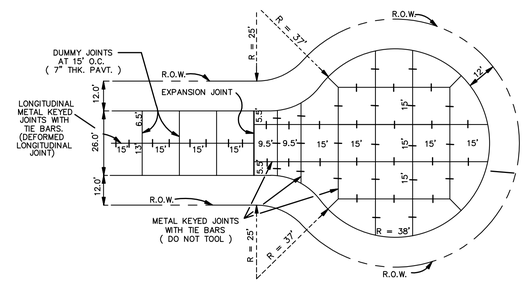


△ NOTE: THICKNESS OF GRANDULAR BASE COURSE SHALL BE RECOMMENDED BY A SOIL ENGINEER OR BASED ON JEFFERSON PARISH SOIL MAP.

TYPICAL SECTION OF 26' ROADWAY

(WITH WRITTEN PERMISSION OF THE DEPT. OF ENGINEERING ONLY)

N.T.S.

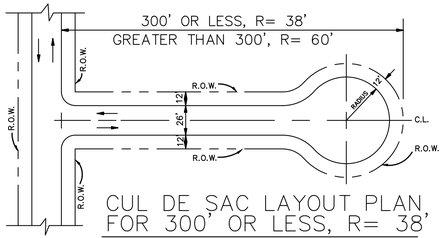


FULL CUL DE SAC (R= 38'/50')

(JOINT DETAIL)

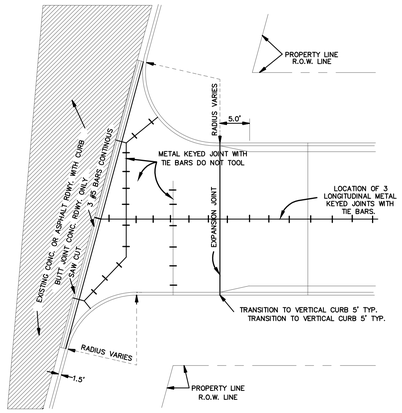
REQUIRED IN DEAD-END STREETS BETWEE 150' TO 300', MEASURED ALONG CENTERLINE FROM INTERSECTION OF PROJECTED EDGE OF ROAD OF NEAREST INTERSECTING STREET TO END OF R.O.W.

N.T.S.



CUL DE SAC LAYOUT PLAN FOR 300' OR LESS, R= 38'

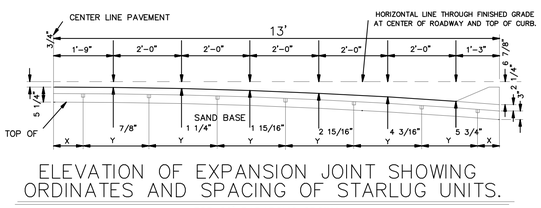
N.T.S.



TYPICAL INTERSECTION

(EXISTING STREET WITH CURB)

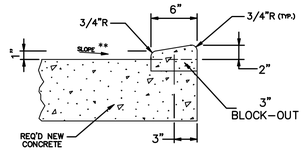
N.T.S.



ELEVATION OF EXPANSION JOINT SHOWING ORDINATES AND SPACING OF STARLUG UNITS.

FOR 26' PARABOLIC CROWN

N.T.S.

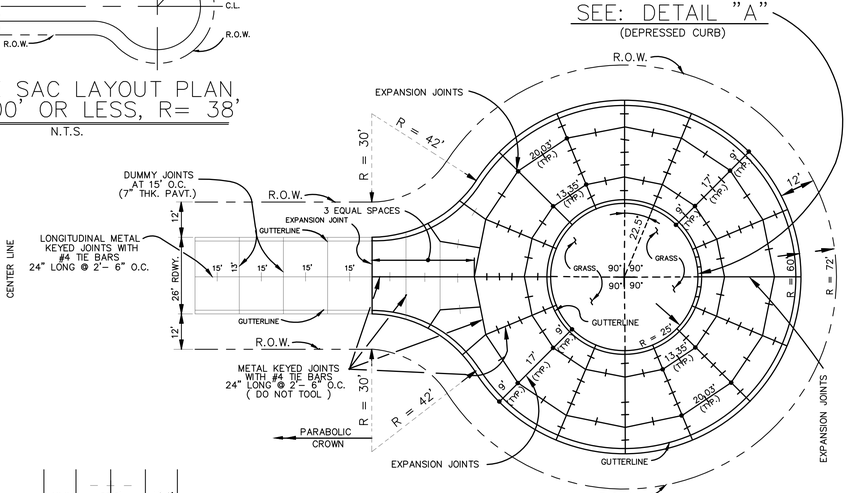


DETAIL "A – A"

MODIFIED DEPRESSED BARRIER CURB

(DRAINAGE TO CURB SHOWN) TO BE USED ON DRIVEWAYS & OTHER AREAS WHICH REQUIRE THE DEPRESSION OF A BARRIER CURB

N.T.S.

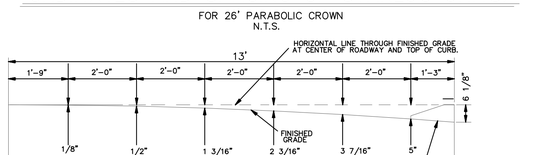


FULL CUL DE SAC (R= 60'/72')

(JOINT DETAIL)

REQUIRED ON DEAD-END STREETS OVER 300' IN LENGTH, MEASURED ALONG CENTERLINE FROM INTERSECTION OF PROJECTED EDGE OF ROAD OF NEAREST INTERSECTING STREET TO END OF R.O.W.

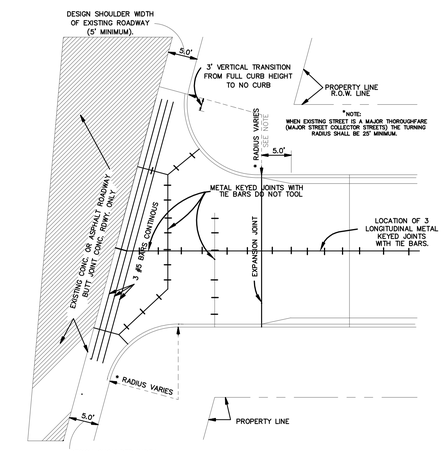
SCALE: N.T.S.



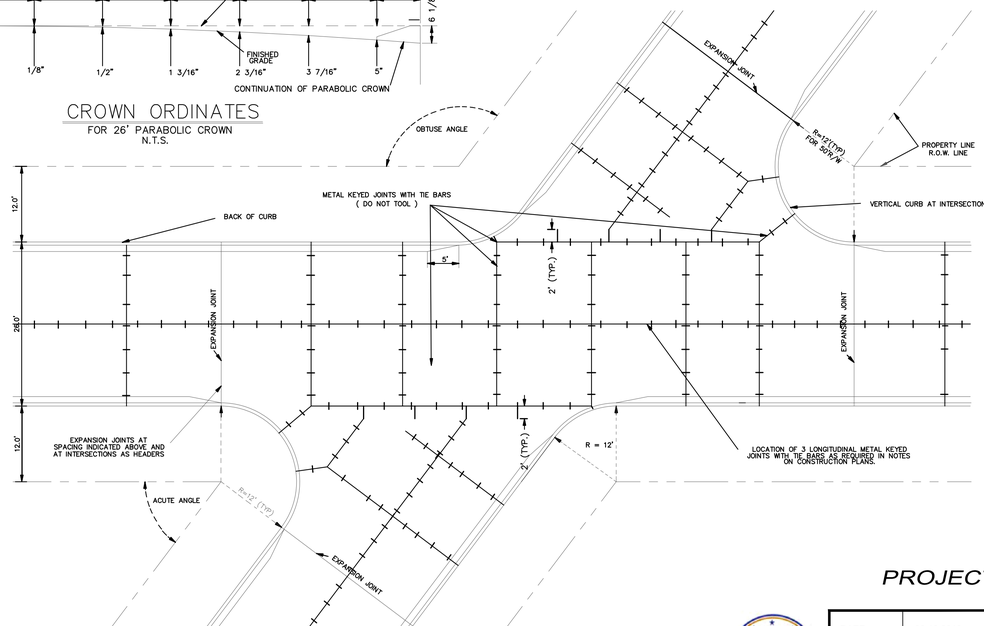
CROWN ORDINATES

FOR 26' PARABOLIC CROWN

N.T.S.



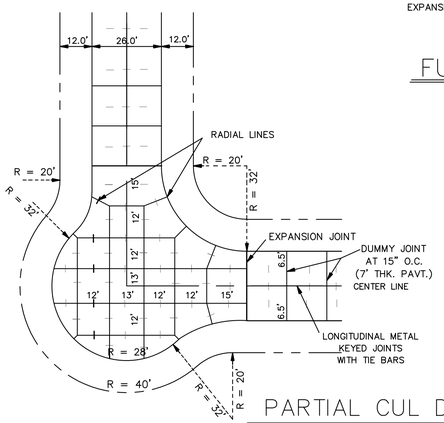
TYPICAL INTERSECTION



TYPICAL ANGLE INTERSECTION

SHOWN FOR 26' STREET IN 50' R.O.W.

N.T.S.



PARTIAL CUL DE SAC

(JOINT DETAIL)

PROJECT NAME :

PROJECT NUMBER:

DATE	08.12.2019
DRAWN BY	MF/AR
SCALE:	NTS

FILENAME: S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT

STANDARD DETAIL PLANS

INTERSECTION DETAIL

APPROVED BY

DATE

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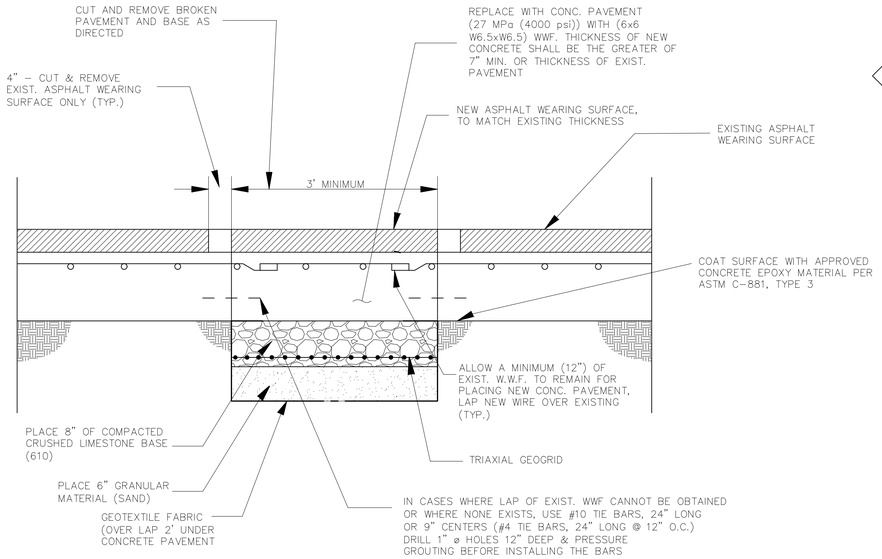
DRAWING NUMBER

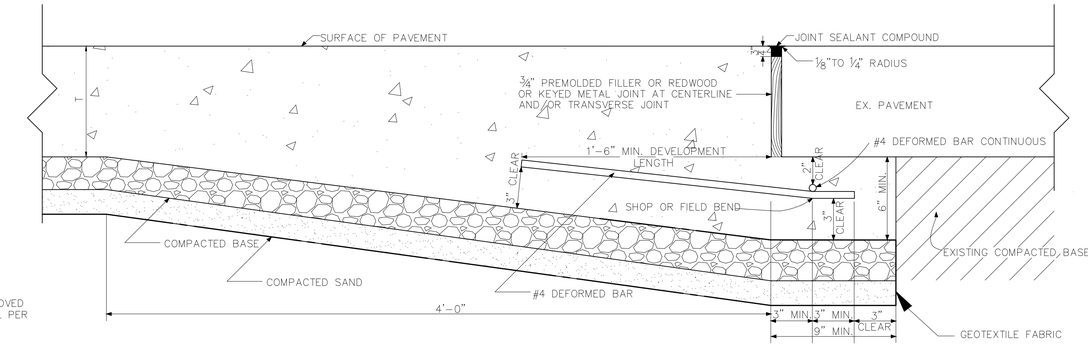
SD - 3

SHEET 3 OF 16



COMPOSITE PAVEMENT REPAIR

N.T.S.

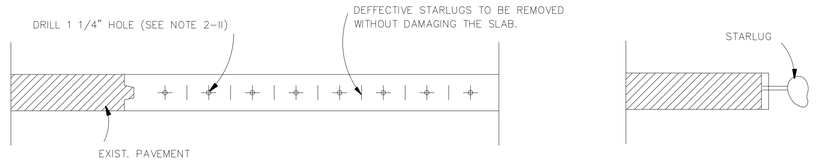


BUTT JOINT

NTS

NOTES:

1) NOTE: "T" = THICKNESS OF PAVEMENT
2) 8" CLASS II BASE COURSE & 6" EMBANKMENT TO BE INSTALLED ONLY IF EX. BASE IS DEEMED UNSUITABLE BY PROJECT ENGINEER.
3) BUTT JOINT ONLY APPLICABLE WHERE EXISTING CONCRETE IS NOT SUITABLE FOR DOWELING. THE PLACEMENT OF THIS JOINT WILL BE DETERMINED BY PROJECT ENGINEER IN THE FIELD.
4) MINIMUM BAR LENGTH IS TO BE 24"
5) BARS ARE TO BE 12" O.C. AT TRANSVERSE JOINTS AND 24" O.C. AT LONGITUDINAL JOINTS.



END VIEW

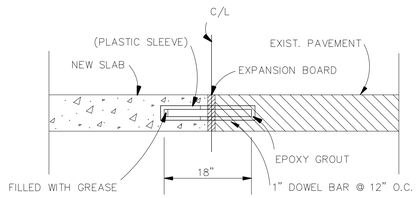
SIDE VIEW

REPLACING JOINT WITH DAMAGED STARLUG SITUATION & DOWELING EXISTING TO PROPOSED CONCRETE

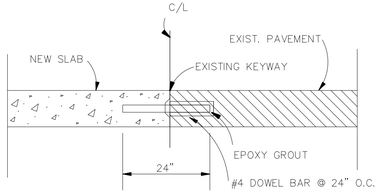
NTS

NOTE:

1. IF TRENCH IS BETWEEN THE EDGE OF THE ROAD AND 1ST. QUARTER POINT, REMOVE SLABS TO THE QUARTER POINT AND REPACE THE SECTION TO GRADE AND THICKNESS AS SPECIFIED, AND FORM BUTT JOINT.
2. IF TRENCH IS BETWEEN THE CURB AND CENTERLINE, PAST THE QUARTER POINT, SAW CUT THE PAVEMENT ALONG CENTERLINE, REMOVE HALF THE SLAB, REPLACE HALF SLAB WITH NEW CONCRETE TO SPECIFIED THICKNESS AND FORM A BUTT JOINT ALONG CENTERLINE. INSTALL QUARTER POINT IN THE NEW SLAB.
3. EXISTING SLOPE MAY BE PAROBOLIC OR TANGENT. SLOPE OF THE NEW SLAB SHALL MATCH THE EXISTING SLAB.



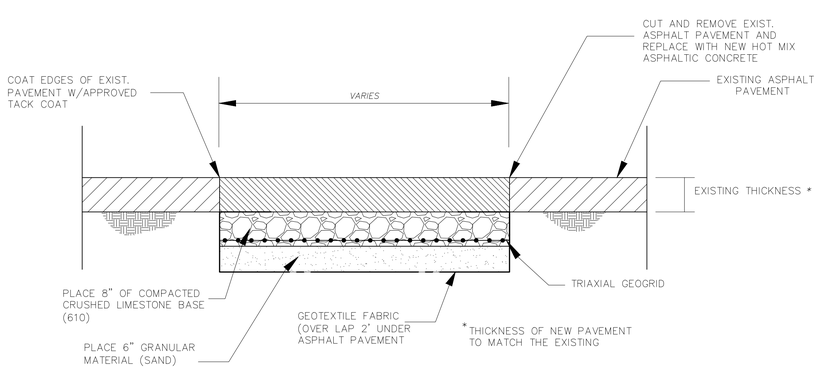
DOWEL BAR DETAIL FOR TRANSVERSE JOINTS



DOWEL BAR DETAIL FOR LONGITUDINAL JOINTS

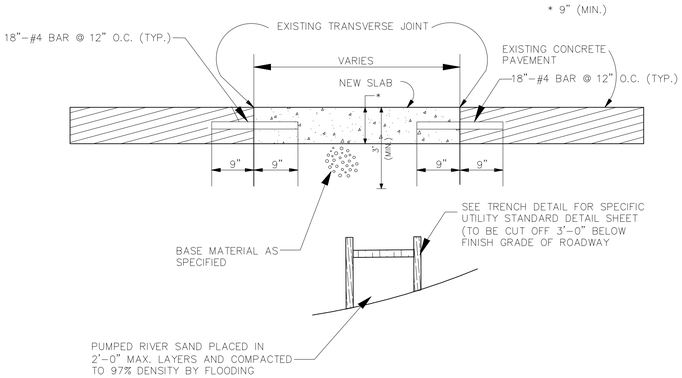
NOTES:

1. THE ENGINEER WILL DECIDE, PER EXISTING FIELD CONDITIONS, WHETHER TO SALVAGE EXISTING STARLUGS OR REPLACE WITH DOWEL BARS.
2. INSTALLING DOWEL BARS AT BUTT JOINTS
   - I. REMOVE ALL OF THE STARLUGS FROM THE OLD EXISTING SECTION OF CONCRETE WITHOUT DAMAGING THE SLAB.
   - II. DRILL 1 1/4" HOLE 9" IN LENGTH BETWEEN STARLUG LOCATIONS IN THE EXISTING SLAB AT CENTER OF SLAB WHERE EXISTING CONCRETE IS > 5".
   - III. INSERT A 1" PLASTIC COATED SMOOTH DOWEL BAR, 18" LONG, 9" DEEP INTO THE DRILLED HOLE AND GROUT WITH APPROVED EPOXY GROUT.
   - IV. GREASE THE REMAINDER OF THE DOWEL BAR AND SLIP A 4" PLASTIC SLEEVE FILLED WITH GREASE OVER END OF BAR AS SHOWN IN DETAIL.
   - V. POUR THE NEW SLAB WITH SMOOTH DOWEL BARS IN POSITION.
   - VI. DO NOT TOE CONCRETE UNDER EXPANSION BOARD OR UNDER EXISTING PAVEMENT.
   - VII. IF THE EXPANSION BOARD IS DAMAGED AND CANNOT BE SALVAGED, REMOVE THE BOARD AND REPLACE WITH AN APPROVED FLEXIBLE JOINT MATERIAL.
   - VII. IF EXISTING CONCRETE IS < 5" A BUTT JOINT WILL BE PLACED ALONG THE FULL LENGTH OF THE TRANSVERSE JOINT.



ASPHALT PAVEMENT REPAIR

N.T.S.



CONCRETE PAVEMENT REPAIR

N.T.S.

PROJECT NAME :

PROJECT NUMBER:

DATE	08.12.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
ROADWAY RESTORATION
AND PAVEMENT REPAIR DETAILS

APPROVED BY

DATE

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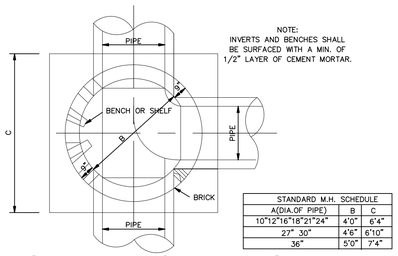
DRAWING NUMBER

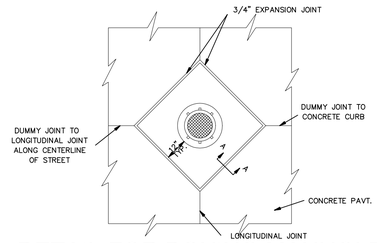
SD - 4

SHEET 4 OF 16

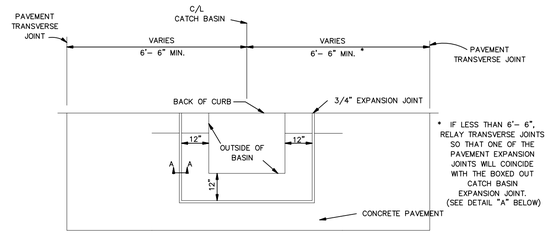


STANDARD M.H. SCHEDULE		
A(DIA.OF PIPE)	B	C
10"12"16"18"21"24"	4'0"	6'4"
27" 30"	4'6"	6'10"
36"	5'0"	7'4"

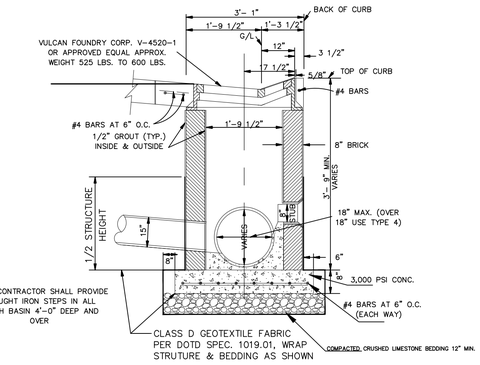
PLAN OF DRAINAGE MANHOLE



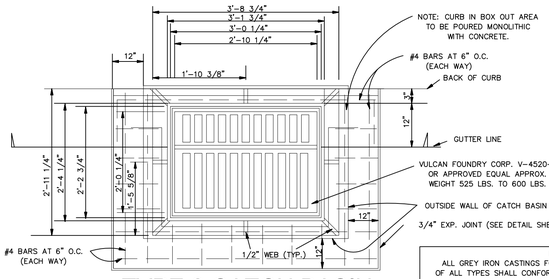
DETAIL FOR BOXING MANHOLE



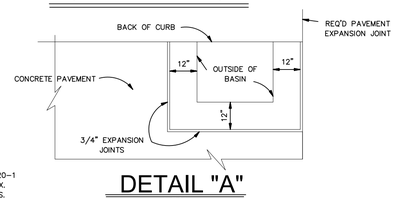
DETAIL FOR BOXING CATCH BASIN (TYPES 2 & 3)



SIDE ELEVATION OF ROLLOVER CATCH BASIN TYPE 2



TYPE 2 CATCH BASIN PLAN VIEW

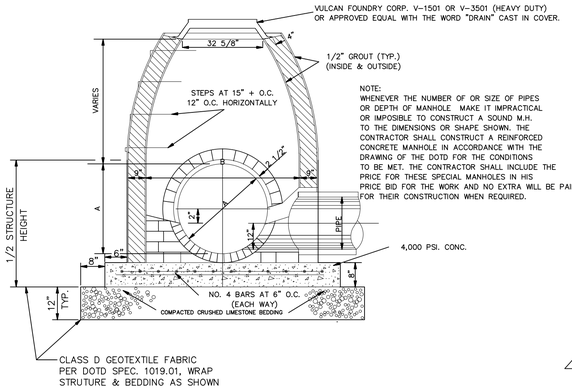


DETAIL "A"

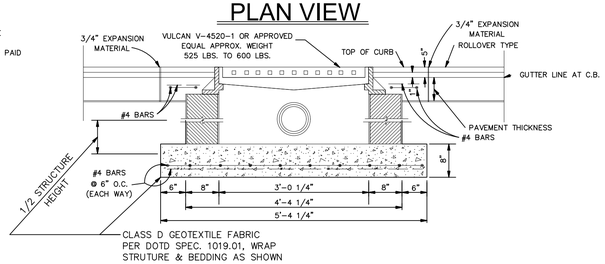
(N.T.S.)

(USE THIS DETAIL WHEN THE DISTANCE BETWEEN CENTERLINE OF CATCH BASIN AND THE NEAREST TRANSVERSE JOINT IS LESS THAN 6'- 6").

NOTE :
ALL GREY IRON CASTINGS FOR MANHOLES, AND CATCH BASINS OF ALL TYPES SHALL CONFORM TO THE REQUIRMENTS OF A.S.T.M. A-48, CLASS 30. AND SHALL BE FURNISHED WITHOUT PAINT (AASHTO M306-891)



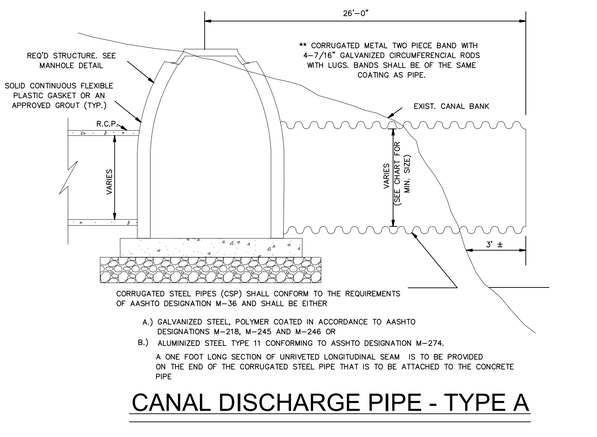
DRAINAGE MANHOLE



TYPE 2 CATCH BASIN SECTION ALONG GUTTER LINE

CANAL DISCHARGE PIPE CHART (CMP)				
R.C.P. NOM. DIA.	WALL THICKNESS	R.C.P. O.D.	REQ'D CMP I.D.	GAGE REQ'D
12"	2"	16"	16.5"	△ 14
15"	2.25"	19.5"	20"	△ 12
18"	2.5"	23"	23.5"	△ 12
21"	2.75"	26.5"	27"	△ 12
24"	3"	30"	30.5"	△ 12
27"	3.25"	33.5"	34"	△ 12
30"	3.50"	37"	37.5"	△ 12
36"	4"	44"	44.5"	△ 12
42"	4.5"	51"	51.5"	△ 12
48"	5"	58"	58.5"	△ 12
54"	5.5'	65"	65.5"	* 12
60"	6"	72"	72.5"	* 12
66"	6.5"	79"	79.5"	* 12
72"	7"	86"	86.5"	* 12
78"	7.5"	93"	93.5"	* 12
84"	8"	100"	100.5"	* 12
90"	8.5'	107"	107.5"	* 12
96"	9"	114"	114.5"	* 12

△ 2 2/3" X 1 1/2" CORRUGATION REQUIRED.
*3" X 1" CORRUGATION REQUIRED.



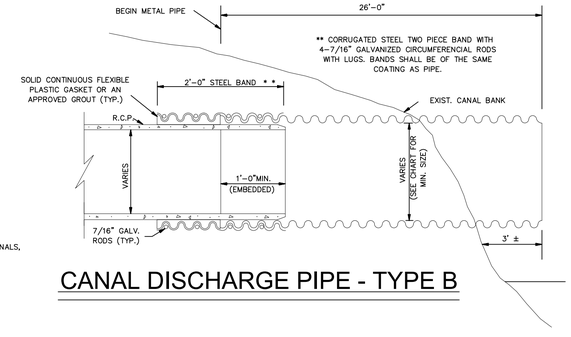
CORRUGATED STEEL PIPES (CSP) SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M-36 AND SHALL BE EITHER

A.) GALVANIZED STEEL, POLYMER COATED IN ACCORDANCE TO AASHTO DESIGNATIONS M-218, M-245 AND M-246 OR

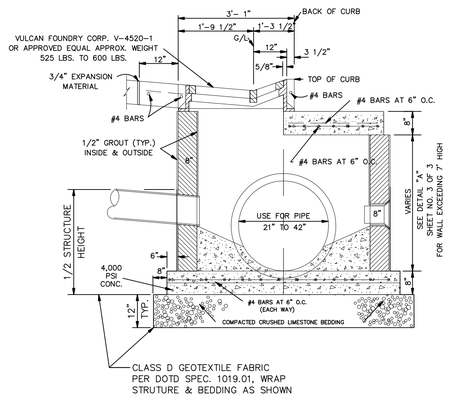
B.) ALUMINIZED STEEL TYPE 11 CONFORMING TO ASSHTO DESIGNATION M-274.

A ONE FOOT LONG SECTION OF UNRIVETED LONGITUDINAL SEAM IS TO BE PROVIDED ON THE END OF THE CORRUGATED STEEL PIPE THAT IS TO BE ATTACHED TO THE CONCRETE PIPE

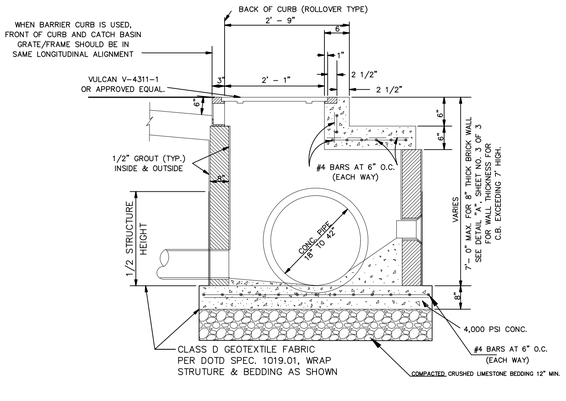
CANAL DISCHARGE PIPE - TYPE A



CANAL DISCHARGE PIPE - TYPE B



TYPE 4 CATCH BASIN



OFFSET CATCH BASIN TYPE NO. 5

POLICY STATEMENT

REQUIRED TECHNICAL INFORMATION FOR DRAINAGE DITCHES OR CANALS WHICH ABUT OR LIE IN THE PROPOSED SUBDIVISIONS:

1). FURNISH A MINIMUM OF TWO (2) CROSS-SECTIONS, ONE AT THE UPSTREAM AND THE OTHER AT THE DOWNSTREAM OF ALL EXISTING DITCHES OR CANALS, THESE CROSS-SECTIONS SHALL BE TIED-IN WITH THE PROPERTY LINE/LINES.

2). SUPERIMPOSE THE MASTER DRAINAGE PLAN'S RECOMMENDED DITCH OR CANAL CROSS-SECTIONS ON THE EXISTING CROSS-SECTIONS, THEN DELINEATE THE REQUIRED MAINTENANCE SERVITUDE ON BOTH SIDES OF THE CANALS OR DITCHES, THESE SERVITUDES ARE THE DISTANCES BETWEEN PROPERTY LINES AND THE TOP OF THE PROPOSED DITCH OR CANAL BANKS. (20 FEET MINIMUM SERVITUDE FOR THE TOP WIDTH OF A DITCH LESS THAN 35 FEET AND 35 FEET MINIMUM SERVITUDE FOR THE TOP WIDTH OF A CANAL LARGER THAN 35 FEET).

3). IF NO RECOMMENDATIONS ARE GIVEN FOR THE PROPOSED CROSS-SECTIONS OF THE DITCHES OR CANALS IN THE MASTER DRAINAGE PLAN THEN FURNISH THE FOLLOWING INFORMATION:

(A). DETERMINE FLOW OF RUN OFF AT THE UPSTREAM REACH OF THE DITCH OR CANAL

(B). CALCULATE RUN OFF GENERATED FROM THE PROPOSED SITE.

(C). CALCULATE THE PROPOSED CROSS-SECTIONS FOR THE DITCH OR CANAL BASED ON THE SUM OF THESE FLOWS THEN PROCEED AS STEP 2.

4). IF THE EXISTING DITCH IS PROPOSED TO BE RELOCATED OR ABANDONED, THEN A SUITABLE CULVERT/CULVERTS SHALL BE SIZED AND AN ADEQUATE MAINTENANCE SERVITUDE SHALL BE SHOWN.

5). IN CALCULATING RUN OFF OR SIZING CULVERTS FOLLOW THE PROCEDURES OUTLINED IN THE ST. BERNARD PARISH DRAINAGE DESIGN MANUAL.

NOTES:

1. GAGES SHOWN ON THE CHART AT LEFT ARE MAX. REQUIREMENTS. LIGHTER GAGES MAY BE ALLOWED SUBJECT TO APPROVAL OF THE DIRECTOR OF ENGINEERING BASED ON SOILS/WATER PH AND RESISTIVITY ANALYSIS TAKEN ON SITE BY OTHERS.IN THE EVENT THAT A LIGHTER GAGE IS ALLOWED, THE DESIGN ENGINEER SHALL SPECIFY SUCH GAGE IN THE PLANS AND SPECIFICATIONS.
2. GAGES AND CORRUGATIONS SHOWN ABOVE ARE APPLICABLE TO ROUND PIPES OR ARCH PIPE EQUIVALENTS.
3. METAL ARCH PIPE CONNECTIONS TO CONCRETE ARCH OR CIRCULAR PIPE WILL NOT BE PERMITTED.
4. A SET OF LIFTING LUGS SHALL BE PROVIDED ON EACH INDEPENDENT SECTION OF PIPE.
5. PIPE SHALL BE FABRICATED WITH CIRCUMFERENTIAL PARALEL CORRUGATIONS AND SHALL UTILIZE THE RIVETING PROCESS AS OUTLINED IN SECTION 1007.03 OF LADOTA SPECIFICATIONS (1982 EDITION). HELICAL PIPES MIGHT BE USED PROVIDED THEIR ENDS SHALL BE REROLLED TO ACCOMODATE ANNULA BANDS.

PROJECT NAME :

PROJECT NUMBER:

DATE	08.09.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
DRAINAGE DETAILS (1 OF 3)

APPROVED BY

DATE

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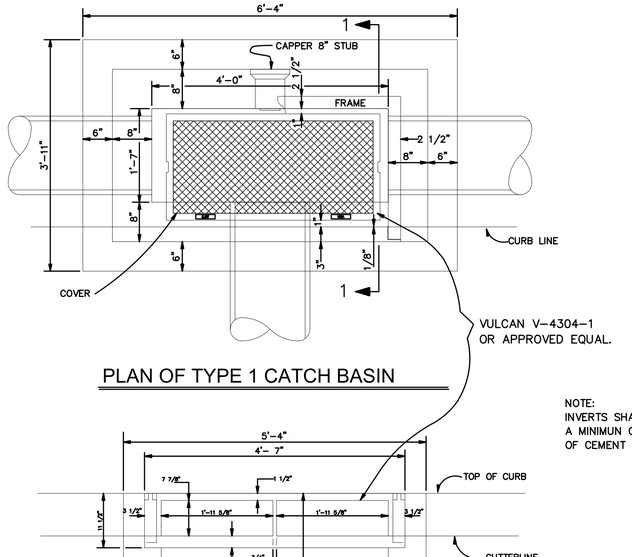
DRAWING NUMBER

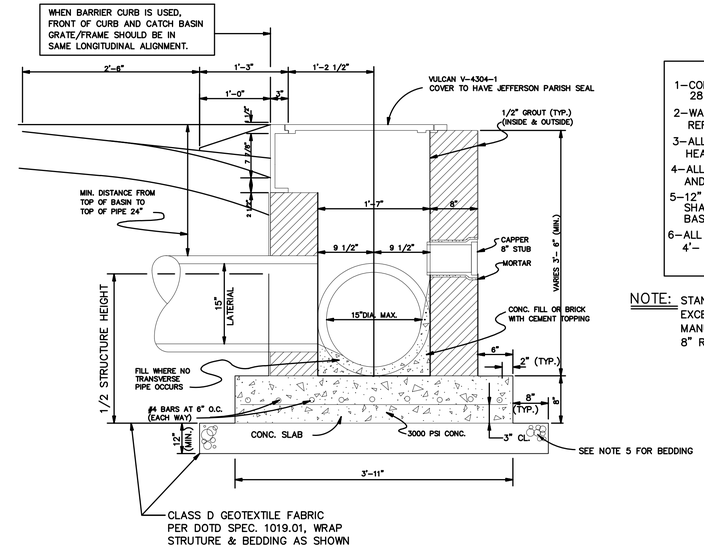
SD - 5

SHEET 5 OF 16

NOTE: ALL GREY IRON CASTINGS FOR MANHOLES AND CATCH-BASINS OF ALL TYPES SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-48, CLASS 30 AND SHALL BE FURNISHED WITHOUT PAINT. (M306-891) CASTING MUST BE OF DOMSETIC UNITED STATES MANUFACTURE ONLY.



PLAN OF TYPE 1 CATCH BASIN



NOTE:
INVERTS SHALL BE SURFACED WITH A MINIMUM OF 1/2" LAYER OF CEMENT MORTAR.

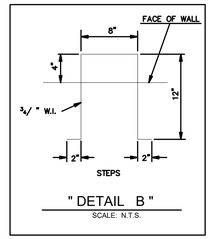
TYPE 1 CATCH BASIN SECTION 1

NOTES

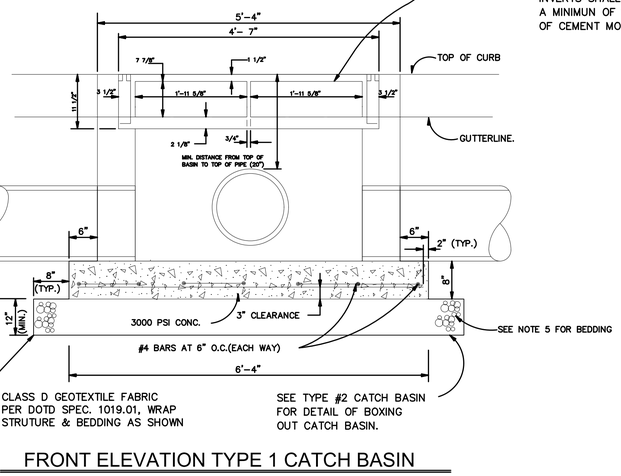
1-CONCRETE STRENGTH TO BE 3,000 PSI (MIN.) AT 28 DAYS.
2-WALL THICKNESS SHALL BE BASED UPON BASIN HEIGHT. REFER TO DETAIL "A" (SEE BELOW).
3-ALL MASONRY TO BE LAID WITH RUNNING BOND AND HEADER COURSE (EVERY FOURTH LAYER).
4-ALL WALLS TO BE PLASTERED 1/2" THICK INSIDE AND OUTSIDE.
5-12" THICK CRUSHED LIMESTONE BEDDING FOUNDATION SHALL BE REQUIRED UNDER MANHOLES AND CATCH BASINS.
6-ALL CATCH BASINS AND MANHOLES GREATER THAN 4'-0" DEEP ARE REQUIRED TO HAVE IRON STEPS.

DIMENSION "A"	REINFORCING	
	# SIZE	# EA. WAY
24" (STANDARD)	# 4	4
24" - 27"	# 5	4
27" - 30"	# 5	6
30" - 36"	# 5	8
36" - 48"	# 6	10

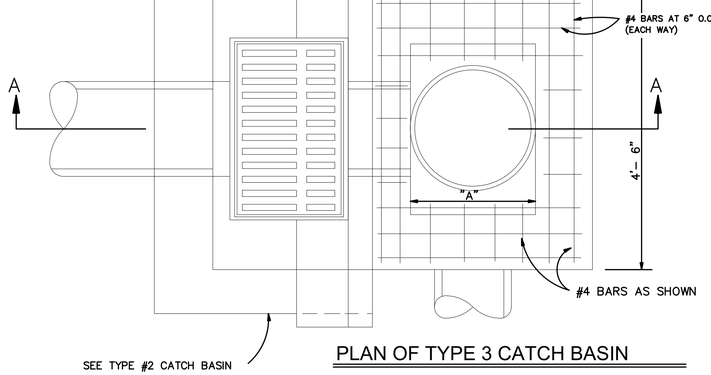
NOTE: STANDARD FOR DIMENSION "A" IS 24". WHEN DIMENSION "A" EXCEEDS 24" CASTING BECOMES PATTERN NO. VM - 6 AS MANUFACTURED BY VULCAN FOUNDRY OR APPROVED EQUAL AND 8" REINFORCED CONCRETE SLAB IS REQUIRED AS CASTING SEAT.



" DETAIL B "
SCALE: N.T.S.



FRONT ELEVATION TYPE 1 CATCH BASIN

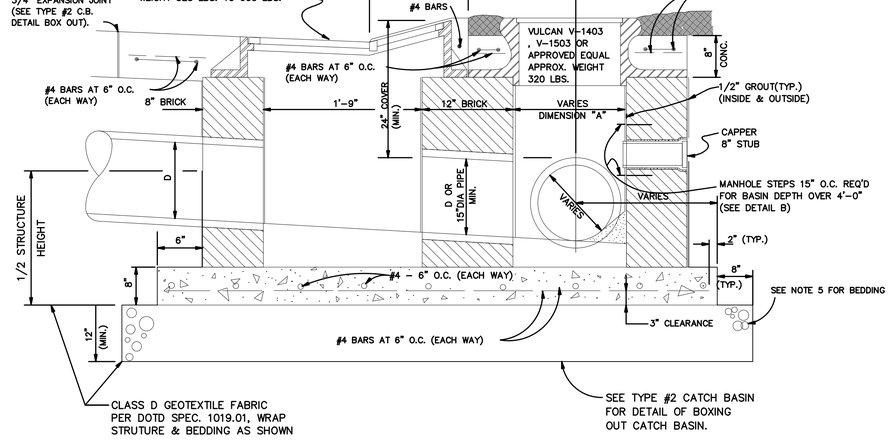


PLAN OF TYPE 3 CATCH BASIN

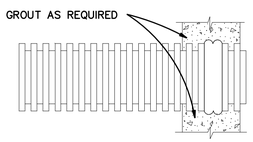
NOTES:

THE DEPARTMENT OF ENGINEERING RESERVES THE RIGHT TO MODIFY PIPE BEDDING REQUIREMENTS IN ACCORDANCE WITH EXISTING FIELD CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

ALL CONCRETE PIPE SHALL BE A.S.T.M. C-76 CLASS III, WALL B, REINFORCED CONCRETE PIPE WITH TYPE 2 JOINT, AND WRAPPED WITH AN 36" PLASTIC FILTER CLOTH (D.O.T.D. SPEC. 1018.15) CENTERED ON THE JOINT AND LAPPED 36". REJECT PIPE, COMMONLY CALLED "SECONDS", WILL NOT BE ACCEPTABLE.

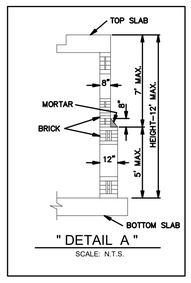


TYPE 3 CATCH BASIN SECTION A-A



USE ONE STANDARD DOUBLE GASKET, POSITIONED ON THE PIPE IN THE CENTER OF THE MANHOLE WITH THE LEADING (LOWER) EDGE OF GASKET CLOSEST TO THE INSIDE OF THE MANHOLE.

PLASTIC PIPE CONNECTION AT MANHOLE
N.T.S.



" DETAIL A "
SCALE: N.T.S.

PROJECT NAME :

PROJECT NUMBER:

DATE	08.09.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
DRAINAGE DETAILS (2 OF 3)

APPROVED BY
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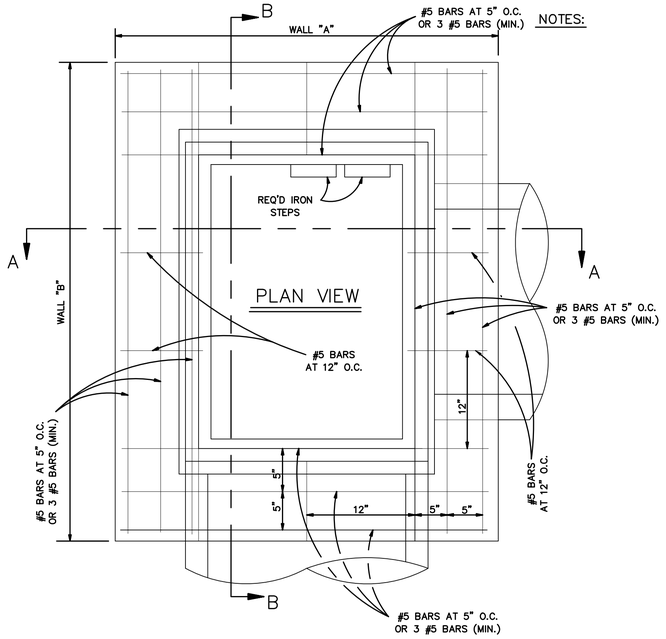
DRAWING NUMBER
SD - 6
SHEET 6 OF 16



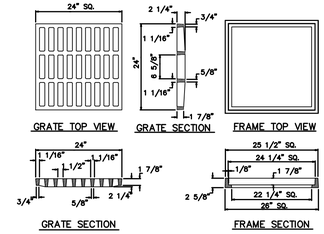
NOTES:

1. CULVERT SIZE SHOWN PERTAIN TO B & S PIPE. (UNLESS OTHERWISE SPECIFIED).
2. CONCRETE STRENGTH TO BE 3,000 PSI (MINIMUM) AT 28 DAYS.
3. DIMENSIONS FOR BOTTOM SLAB AS PER DIMENSIONS FOR WALLS "A" AND "B".
4. WHEN BOX IS 7'– 0" OR LESS IN HEIGHT, WALLS TO BE 8" THICK. WHEN BOX HEIGHT IS GREATER THAN 7'– 0" BUT LESS 12'– 0". SEE DETAIL "A".
5. WIDTH OF SHELL BEDDING SHALL BE AS PER DIMENSIONS SHOWN FOR WALLS "A" AND "B" PLUS 2'– 0".
6. ALL MASONARY TO BE LAID WITH RUNNING BOND AND HEADER COURSE (EVERY FOURTH LAYER).
7. ALL WALLS TO BE PLASTERED INSIDE AND OUTSIDE (1/2" MIN. THICKNESS).
8. ALL GRATES AND FRAMES SHALL BE VULCAN FOUNDRY OR APPROVED EQUAL. ALL CAST IRON TYPE AND WITHOUT PAINT.

Δ NOTE:
ALL GREY CASTINGS FOR MANHOLES, AND CATCH BASINS OF ALL TYPES SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A–48, CLASS 30, AND SHALL BE FURNISHED WITHOUT PAINT (AASHTO§306–891)

SQUARE " GRATE " (V–5724–1)							
CULVERT SIZE	BOTTOM SLAB	TOP SLAB (A & B)	C & D	CULVERT SIZE	BOTTOM SLAB	TOP SLAB	C & D
12"DIA.	4'–2"X 4'–2"	3'–2"X 3'–2"	7 7/8"	21"DIA.X24"DIA.	5'–0"X 5'–0"	4'–6"X 4'–6"	15 7/8"
15"DIA.	4'–4"X 4'–4"	3'–4"X 3'–4"	8 7/8"	27"DIA.X30"DIA.	6'–0"X 6'–0"	5'–0"X 5'–0"	18 7/8"
18"DIA.	4'–6"X 4'–6"	3'–6"X 3'–6"	9 7/8"	36"DIA.	6'–6"X 6'–6"	5'–6"X 5'–6"	21 7/8"

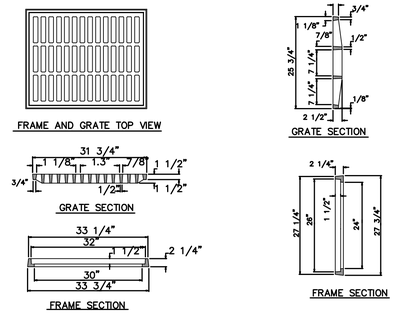
RECTANGULAR " GRATE " (V–5762)				
CULVERT SIZE ON WALLS A & B	WALL "A"	" C "	WALL "B"	" D "
21"DIA.& 24"DIA. B& S	4'– 6"	15" (3 NO.5 BARS)	4'– 6"	15" (3 NO.5 BARS)
27"DIA.& 30"DIA. B& S	5'– 0"	18" (3 NO.5 BARS)	5'– 0"	15" (3 NO.5 BARS)
36"DIA. B& S	5'– 9"	22 1/2" (3 NO.5 BARS)	5'– 9"	19 1/2" (3 NO.5 BARS)
42"DIA. B& S	6'– 6"	27" (4 NO.5 BARS)	6'– 6"	24" (4 NO.5 BARS)
48"DIA. B& S	7'– 0"	30" (5 NO.5 BARS)	7'– 0"	27" (4 NO.5 BARS)
54"DIA. T& G	7'– 3"	31 1/2" (5 NO.5 BARS)	7'– 3"	28 1/2" (5 NO.5 BARS)
60"DIA. T& G	7'– 9"	35" (6 NO.5 BARS)	7'– 9"	32" (6 NO.5 BARS)
72"DIA. T& G	9'– 0"	42" (7 NO.5 BARS)	9'– 0"	39" (7 NO.5 BARS)



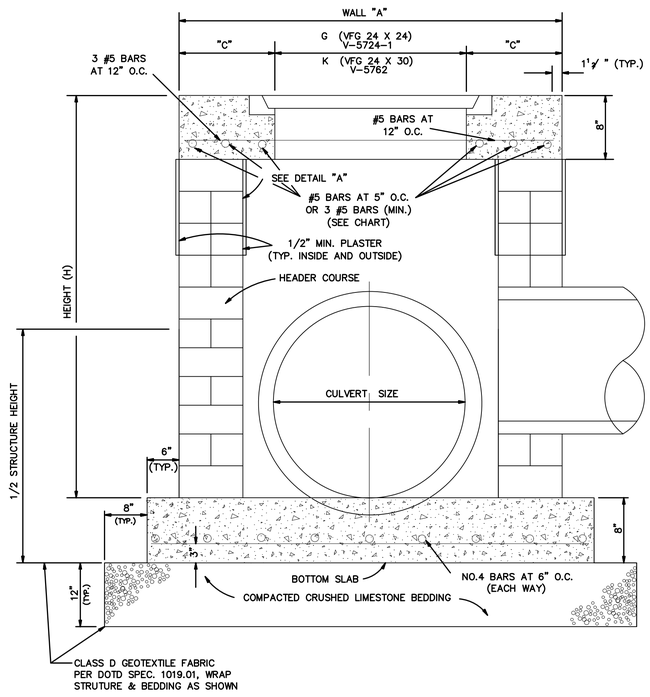
SQUARE D.I.

NOTE:
SOLID COVERS ARE AVAILABLE ON REQUEST.

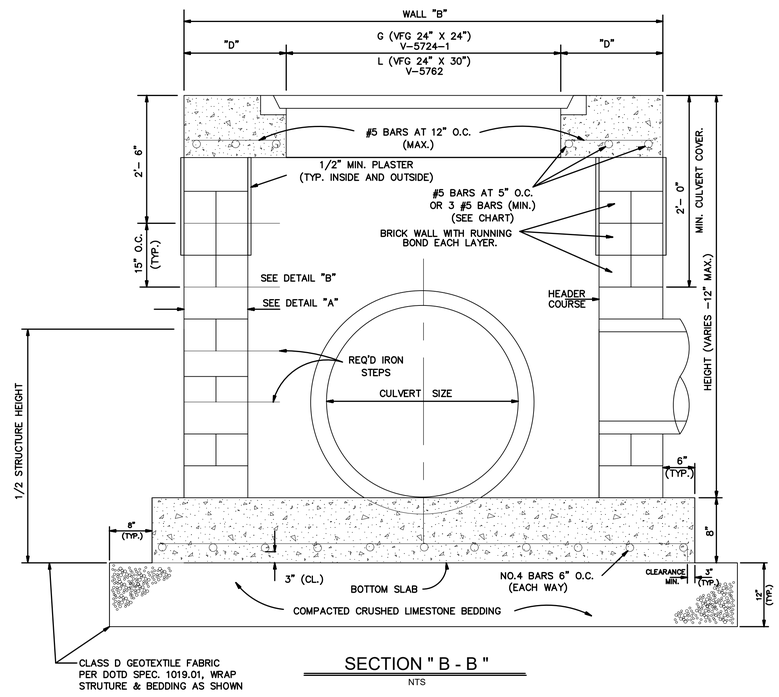
B & S = BELL & SPIGOT
T & G = TONGUE & GROOVE
W.I. = WROUGHT IRON



RECTANGULAR D.I.



SECTION " A - A "
NTS



SECTION " B - B "
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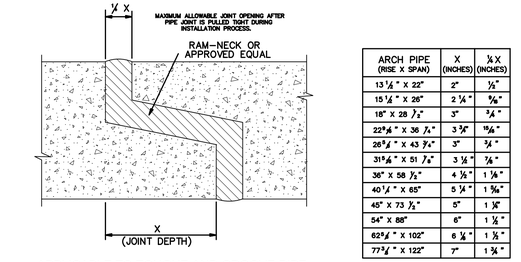
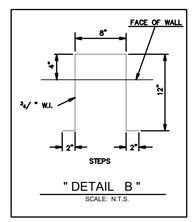


ARCH PIPE (RISE X SPAN)	X (INCHES)	¼X (INCHES)
13 1/8 " X 22"	2"	½"
15 1/4 " X 26"	2 ¼ "	5/8"
18" X 28 7/8"	3"	¾ "
22"5/8 " X 36 1/4 "	3 3/8"	15/16 "
26"3/4 " X 43 3/4""	3"	¾ "
31"5/8 " X 51 7/8"	3 ½ "	⅞ "
36" X 58 1/2 "	4 ½ "	1 ⅛ "
40 1/4 " X 65"	5 ¼ "	1 5/16"
45" X 73 1/8 "	5"	1 ⅜"
54" X 88"	6"	1 ½ "
62"3/4 " X 102"	6 ¼ "	1 ½ "
77"3/4 " X 122"	7"	1 ¾ "

APPLICABLE TO TONGUE AND GROOVE PIPE
(ARCH PIPE ONLY)
N.T.S.



" DETAIL B "
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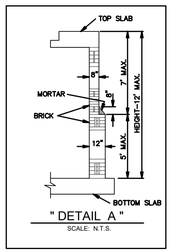

" DETAIL A "
SCALE: N.T.S.

DROP INLET

PROJECT NAME :

PROJECT NUMBER:

DATE	08.09.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
DRAINAGE DETAILS (3 OF 3)

APPROVED BY

DATE

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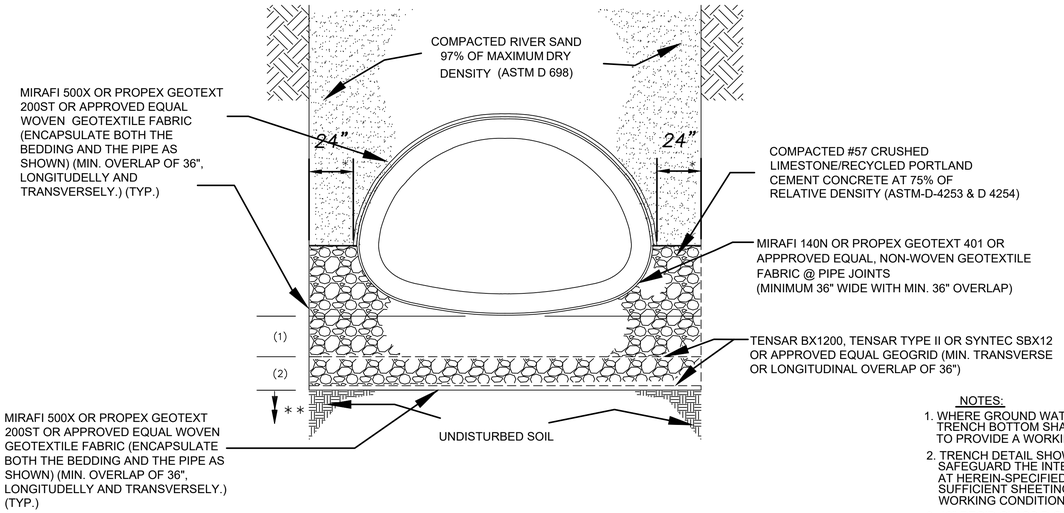
DRAWING NUMBER

SD - 7

SHEET 7 OF 16



TYPICAL CONCRETE DRAINAGE PIPE TRENCH DETAIL

(36"-72" RCP) AND [42"-96" RCPA]

N.T.S.

(RCP) & [RCPA] MINIMUM *** BEDDING THICKNESS (in.)

		UNDISTURBED SUBGRADE NET ALLOWABLE SOIL BEARING CAPACITY (psf.)				
		300-400	401-500	501-600	601-700	>700
PIPE SIZE (RCP) (RCPA)	BEDING LAYER					
(36" & 42")	(1)	20"	18"	16"	14"	12"
[42" & 48"]	(2)	8"	8"	8"	8"	8"
TOTAL THICKNESS		28"	26"	24"	22"	20"
(48" & 54")	(1)	22"	20"	18"	14"	12"
[54" & 60"]	(2)	10"	10"	10"	10"	10"
TOTAL THICKNESS		32"	30"	28"	24"	22"
(60" & 72")	(1)	34"	30"	26"	16"	14"
[72",84"& 96"]	(2)	10"	10"	10"	10"	10"
TOTAL THICKNESS		44"	40"	36"	26"	24"

NOTES:
*1. SIDE BEDDING WIDTH MAY BE REDUCED WITH ST BERNARD'S PARISH PROJECT ENGINEER'S APPROVAL.
2. THE DEPARTMENT OF ENGINEERING RESERVES THE RIGHT TO MODIFY PIPE BEDDING REQUIREMENTS IN ACCORDANCE WITH EXISTING FIELD CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
3. TRENCH SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. THE PARISH OR ITS REPRESENTATIVES RESERVE THE RIGHT TO REQUIRE THE CONTRACTOR TO MODIFY ANY PORTIONS OF SHORING SYSTEM DEEMED UNSAFE, BUT THE FINAL RESPONSIBILITY FOR THE WORKER'S SAFETY REMAINS WITH THE CONTRACTOR. TRENCH DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS AND REQUIREMENTS.
4. TIMBER SHEETING, IF USED, MUST REMAIN IN PLACE AND BE CUT OFF A MINIMUM OF 3 FEET BELOW FINISHED GRADE.
5. ALL CONCRETE PIPE SHALL BE A.S.T.M. C-76 (RCP) AND A.S.T.M. C-506 [RCPA], CLASS III, WALL B, REINFORCED CONCRETE PIPE WITH TYPE 2 JOINTS.
6. THE CONTRACTOR MUST REVIEW ALL DETAILS AND CHARTS INCLUDED ON THIS STANDARD DRAWING SHEET PRIOR TO BIDDING. FOR PIPES 36" AND LARGER, THE TRENCH DESIGN AND BEDDING THICKNESSES WILL VARY DEPENDING ON THE "UNDISTURBED SUBGRADE NET ALLOWABLE SOIL BEARING CAPACITY" VALUE. THE "DESCRIPTION SECTION" OF "TECHNICAL SPECIFICATIONS" FOR "CULVERTS AND STORM DRAINS" MUST REFERENCE THIS ST BERNARD STANDARD DRAWING AND MUST PROVIDE THE "UNDISTURBED SUBGRADE NET ALLOWABLE SOIL BEARING CAPACITY" VALUE.
**7 WHERE GROUND WATER OR AN UNSTABLE TRENCH BOTTOM EXISTS, THE TRENCH BOTTOM SHALL BE STABILIZED (ASTM D2321) TO PROVIDE A WORKING PLATFORM. REMOVE MUCK OR OTHER SOFT MATERIAL, TREE ROOTS, AND/OR ANY OTHER UNDESIRABLE MATERIAL FROM THE TRENCH BOTTOM TO A DEPTH NECESSARY TO ESTABLISH A FIRM FOUNDATION.
***8. GEOTECHNICAL REPORT'S RECOMMENDATIONS FOR PIPE BEDDING, IF MORE STRINGENT, SHALL SUPERSEDE THESE MINIMUM THICKNESSES.

PIPE DIA.	DIMENSION 'A' MIN.	DIMENSION 'B' MIN.
15	6"	12"
18	6"	12"
21	6"	12"
24	6"	12"
30	12"	12"
36	12"	12"
42	12"	18"
48	12"	18"
54	15"	18"
60	18"	24"
66	18"	24"
72	18"	24"

NOTES:
1. WHERE GROUND WATER OR UNSTABLE TRENCH BOTTOM EXISTS, TRENCH BOTTOM SHALL BE STABILIZED (ASTM D2321) TO PROVIDE A WORKING PLATFORM.
2. TRENCH DETAIL SHOWN WILL BE MIN. REQUIREMENTS TO SAFEGUARD THE INTEGRITY OF THE DRAIN LINE INSTALLATION AT HEREIN-SPECIFIED DEPTHS. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SHEETING AND BRACING TO PROVIDE SAFE WORKING CONDITIONS FOR HIS WORKMEN.
3. 18" REQ'D CLASS D GEOTEXTILE FABRIC OVER TOP OF CLASS II BASE (TYP.)

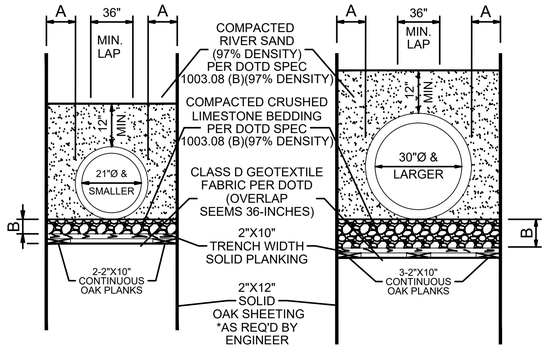
NOTES:
* COMPACTED SAND, ASTM 2321 CLASS II (SW OR SP) MIN. DENSITY 97% STANDARD PROCTOR (ASTM D1557) 2' MAX. LAYERS.
** PROVIDE BELL HOLES AT EACH JOINT.
*** COMPACTED SAND, ASTM 2321 CLASS II (SW OR SP) MIN. DENSITY 95% STANDARD PROCTOR (ASTM D1557) 2' MAX. LAYERS.
**** COMPACTED CLASS II BASE COURSE (610 LIMESTONE) MIN. DESITY 95% STANDARD PROCTOR (ASTM D1557)

PIPE BEDDING LIMESTONE

57 LIMESTONE		
U.S. SIEVE	METRIC SIEVE	PERCENT PASSING
1½"	37.5 mm	100
1"	25 mm	95-100
½"	12.5 mm	25-60
#4	4.75 mm	0-10
#8	2.36 mm	0-5

MODIFIED 610 LIMESTONE		
U.S. SIEVE	METRIC SIEVE	PERCENT PASSING
1½"	37.5 mm	100
1"	25 mm	90-100
¾"	19 mm	70-100
½"	12.5 mm	60-90
⅜"	9.5 mm	50-80
#4	4.75 mm	35-65
#40	425 µ m	12-32
#200	75 µ m	5-12

LEGEND:
(1) BEDDING LAYER
(RCP) REINFORCED CONCRETE CIRCULAR (ROUND) PIPE.
[RCPA] **REINFORCED CONCRETE ARCH PIPE**



CIRCULAR PIPE DRAIN LINES

N.T.S

DRAIN LINE BEDDING AND BACKFILL DETAILS FOR RCP & RCPA

DRAIN LINE BEDDING NOTES:

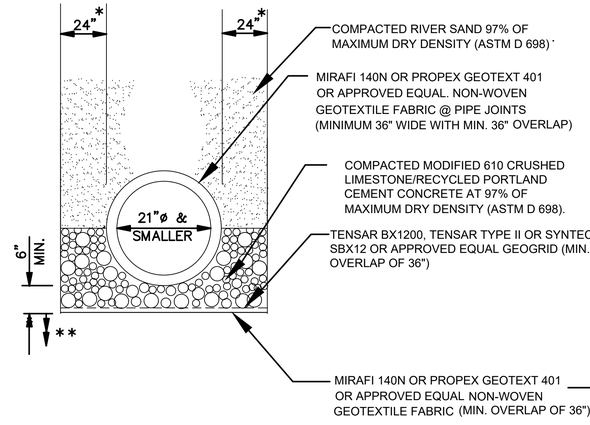
THE DEPARTMENT OF PUBLIC WORKS RESERVES THE RIGHT TO MODIFY PIPE BEDDING REQUIREMENTS IN ACCORDANCE WITH EXISTING FIELD CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

ALL CONCRETE PIPE SHALL BE A.S.T.M. C-76 CLASS III, WALL B, REINFORCED CONCRETE PIPE WITH TYPE 2 JOINT, AND WRAPPED WITH AN 36" PLASTIC FILTER CLOTH (D.O.T.D. SPEC. 1019) CENTERED ON THE JOINT AND LAPPED 36". REJECT PIPE, COMMONLY CALLED "SECONDS", WILL NOT BE ACCEPTABLE. (N.D.P.)

MINIMUM COVER REQUIREMENTS TO BE 12" FOR DRAIN LINES LOCATED WITHIN ROADWAY AND 18" FOR DRAIN LINES LOCATED OUTSIDE OF ROADWAY.

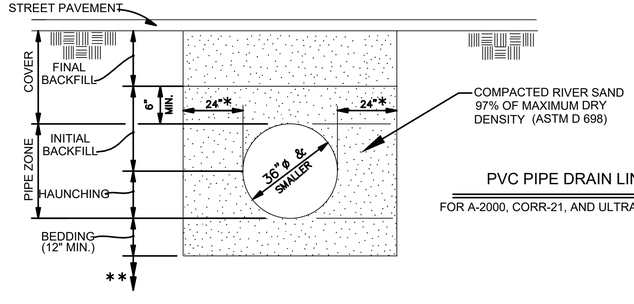
SHEETING IS AT THE OPTION OF THE CONTRACTOR. NO TIMBER SHEETING IS TO BE PULLED FROM THE GROUND. TIMBER SHEETING, WHEN USED, SHALL BE CUT OFF TO A MINIMUM OF 3' BELOW GRADE AND LEFT IN PLACE.

JOINT SHALL BE WRAPPED WITH A 36" WIDE GEOTEXTILE FABRIC (D.O.T.D. SPEC. 1019) CENTERED ON THE JOINT AND LAPPED 36". REJECT PIPE, COMMONLY CALLED "SECONDS", WILL NOT BE ACCEPTABLE. (N.D.P.)



SMALL (RCP) & [RCPA] PIPE TRENCH DETAILS

N.T.S.



MIN. COVER (PVC PIPE)	PAVEMENT TYPE
12"	CONCRETE
18"	ASPHALT
24"	NON-PAVED

PVC PIPE DRAIN LINE STANDARD TRENCH DETAIL

FOR A-2000, CORR-21, AND ULTRA CORR PVC PIPE (ASTM F-794 AND ASTM D2321) N.T.S.

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ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
DRAIN LINE BEDDING AND BACKFILL DETAILS

APPROVED BY

DATE

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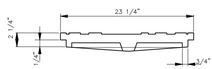
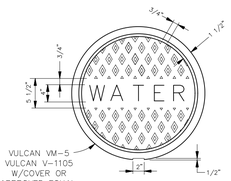
SHEET X OF X



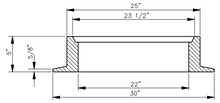
COVER SECTION

N.T.S.



FRAME COVER

N.T.S.

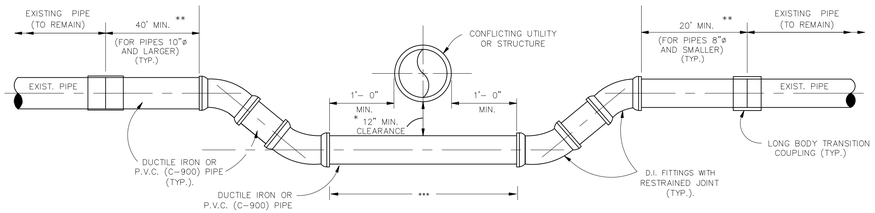


FRAME SECTION

N.T.S.

MANHOLE COVER

N.T.S.



EXCEPTION. MINIMUM CLEARANCE SHALL BE 18" BETWEEN POTABLE WATER AND SANITARY SEWER LINES.

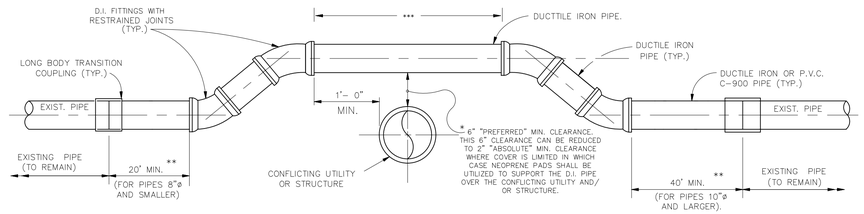
** REQUIRED MIN. RESTRAINED LENGTH.

*** ANY LENGTH OF DUCTILE IRON PIPE OR P.V.C. PIPE OVER 20' WILL BE PAID FOR UNDER THE UNIT PRICE FOR DUCTILE IRON PIPE OR P.V.C. PIPE. (20' MAX. INCLUDED IN OFFSET PRICE)

TYPICAL VERTICAL (UNDER) OR HORIZONTAL OFFSET DETAILS

FOR WATER AND SEWER FORCE MAINS

N.T.S.



* EXCEPTION. MINIMUM CLEARANCE SHALL BE 18" BETWEEN POTABLE WATER AND SANITARY SEWER LINES.

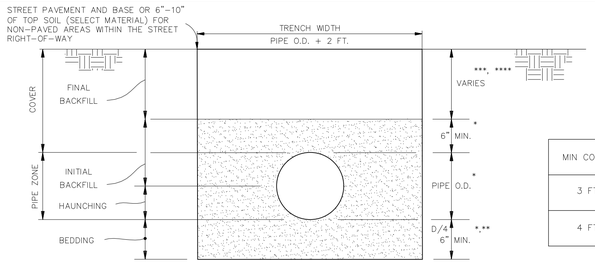
** REQUIRED MIN. RESTRAINED LENGTH.

*** ANY LENGTH OF DUCTILE IRON PIPE OVER 20' WILL BE PAID FOR UNDER THE UNIT PRICE FOR DUCTILE IRON PIPE (20' MAX. INCLUDED IN OFFSET PRICE.)

TYPICAL VERTICAL (OVER) OFFSET DETAILS

FOR WATER AND SEWER FORCE MAINS.

N.T.S.



MIN COVER	PIPE SIZE (INCHES)
3 FT.	8-10
4 FT.	>12

NOTES:

* COMPACTED SAND, ASTM 2321 CLASS II (SW OR SP) MIN. DENSITY 90% STANDARD PROCTOR (ASTM D698) 6" MAX LAYERS.

** PROVIDE BELL HOLES AT EACH JOINT.

*** SELECT EXCAVATED MATERIAL FREE OF STUMPS, DEBRIS AND VOIDS (CANAL BANKS AND DITCHES ONLY).

**** RIVER SAND WITHIN THE STREET RIGHT-OF-WAY MIN. DENSITY 95% STANDARD PROCTOR (ASTM D698)

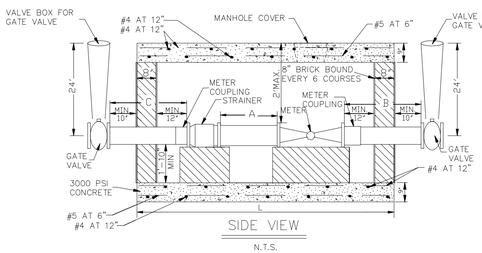
NOTES:

1. WHERE GROUND WATER OR UNSTABLE TRENCH BOTTOM EXISTS, TRENCH BOTTOM SHALL BE STABILIZED (ASTM D2321) TO PROVIDE A WORKING PLATFORM
2. TRENCH DETAIL SHOWN WILL BE MIN. REQUIREMENTS TO SAFEGUARD THE INTEGRITY OF THE WATERLINE INSTALLATION AT HEREIN-SPECIFIED DEPTHS. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SHEETING AND BRACING TO PROVIDE SAFE WORKING CONDITIONS FOR HIS WORKMEN

WATER AND SEWER FORCE MAIN STANDARD TRENCH DETAIL

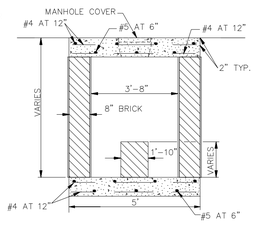
FOR D.I., PVC-C900 AND HDPE (MIN. THICKNESS, DR.17) PIPES

N.T.S.



SIDE VIEW

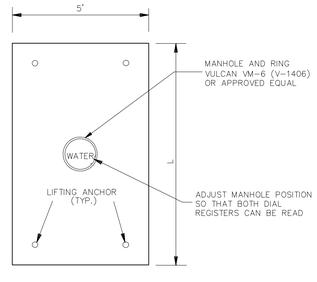
N.T.S.



FRONT VIEW

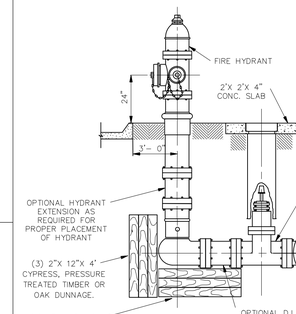
N.T.S.

BRICK METER BOX FOR 4" AND LARGER METERS



TOP VIEW

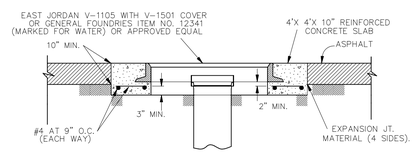
N.T.S.



FIRE HYDRANT COLOR CODE	
SILVER BODY	VISIBILITY
RED TOP	4" MAIN
ORANGE TOP	6" MAIN
GREEN TOP	8" MAIN
LIGHT BLUE TOP	10" & ABOVE
BLUE CAP	VALVE ON HYDRANT

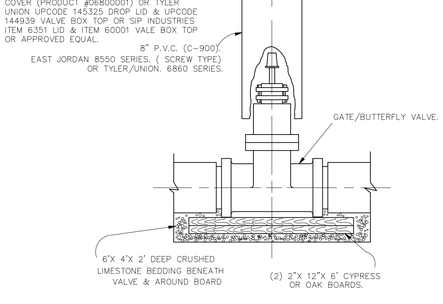
FIRE HYDRANT ASSEMBLY DETAIL

N.T.S.



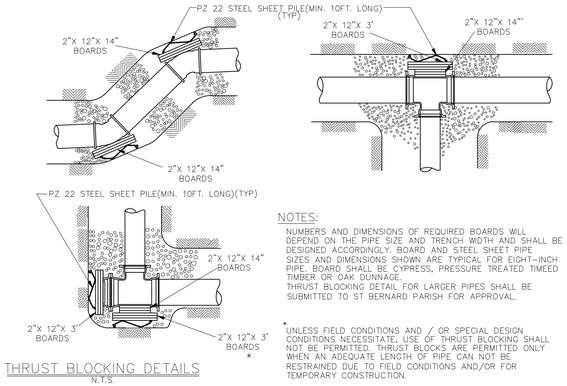
VALVE BOX MANHOLE COVER FOR TRAFFIC AREAS.

N.T.S.



VALVE BOX DETAIL (NON TRAFFIC AREA)

N.T.S.



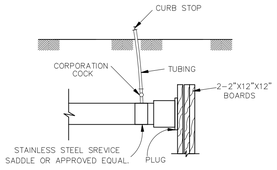
THRUST BLOCKING DETAILS

N.T.S.

NOTES:

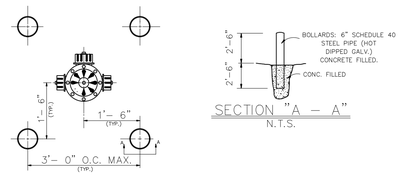
NUMBERS AND DIMENSIONS OF REQUIRED BOARDS WILL DEPEND ON THE PIPE SIZE AND TRENCH WIDTH AND SHALL BE DESIGNED ACCORDINGLY. BOARD AND STEEL SHEET PIPE SIZES AND DIMENSIONS SHOWN ARE TYPICAL FOR EIGHT-INCH PIPE. BOARD SHALL BE CYPRESS, PRESSURE TREATED TIMEED TIMBER OR OAK DUNNAGE.
THRUST BLOCKING DETAIL FOR LARGER PIPES SHALL BE SUBMITTED TO ST BERNARD PARISH FOR APPROVAL.

* UNLESS FIELD CONDITIONS AND / OR SPECIAL DESIGN CONDITIONS NECESSITATE, USE OF THRUST BLOCKING SHALL NOT BE PERMITTED. THRUST BLOCKS ARE PERMITTED ONLY WHEN AN ADEQUATE LENGTH OF PIPE CAN NOT BE RESTRAINED DUE TO FIELD CONDITIONS AND/OR FOR TEMPORARY CONSTRUCTION.



TEMPORARY BLOW-OFF DETAIL

N.T.S.



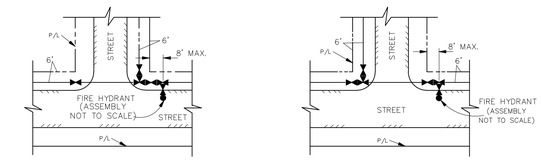
SECTION " A - A "

N.T.S.

BOLLARDS FOR FIRE HYDRANTS

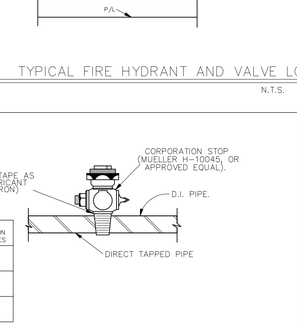
TO PROTECT FROM TRAFFIC

N.T.S.



TYPICAL FIRE HYDRANT AND VALVE LOCATIONS AT INTERSECTIONS

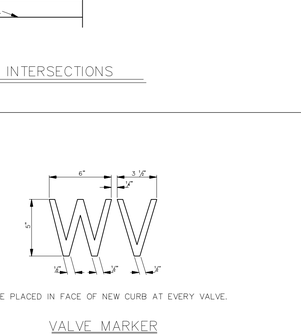
N.T.S.



NORNAL PIPE SIZE, INCHES	SIZE OF CORPORATION STOP, INCHES
16" AND SMALLER	1
16" THROUGH 36"	2
LARGER THAN 36"	3

TYPICAL AIR VALVE INSTALLATION

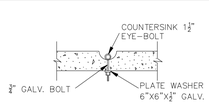
N.T.S.



TO BE PLACED IN FACE OF NEW CURB AT EVERY VALVE.

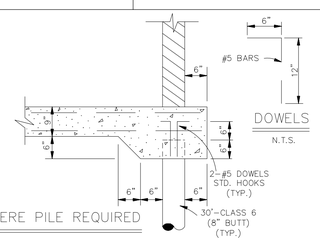
VALVE MARKER

N.T.S.



LIFT-RING DETAIL FOR EYE-HOOKS

N.T.S.



DOWELS

N.T.S.

CORNER DETAIL WHERE PILE REQUIRED

N.T.S.

PRECAST METER BOX OPTION SPECIFICATIONS:

- SELF CONSOLIDATING CONCRETE COPRONTAINING ADMIXTURES MEETING ASTM C494 TYPE A TO ENSURE UNIFORM SUSPENSION OF AGGREGATE THROUGHOUT.
- CONCRETE STRENGTH – 5000 PSI (MIN.) @ 28 DAYS
- REINFORCING STEEL: #4, 5, AND 6 BARS PER ASTM A-615, GRADE 60
- ASTM-A48 C-35 H-20/AASHTO M-306.
- LIFTING ANCHOR BY A.L.PATTERSON, INC. MODEL#LUA64G (OR APPROVED EQUAL)WITH MINIMUM SAFE WORKING LOAD OF 4,460 LBS PER ANCHOR.
- SHOP DRAWINGS MUST BE SUBMITTED TO ST BERNARD PARISH FOR APPROVAL

METER SIZE	APPROXIMATE METER LENGTH (IN.)	APPROXIMATE STRAINER LENGTH (IN.)	MIN A (IN.)	MIN B (IN.)	MIN C (IN.)	MIN L (IN.)
4"	20	20	20	30	30	98
6"	24	24	30	30	30	116
8"	30	30	40	40	30	143

PROJECT NAME :

PROJECT NUMBER:

DATE	08.09.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT

STANDARD DETAIL PLANS

WATER STANDARD DETAILS

APPROVED BY

DATE

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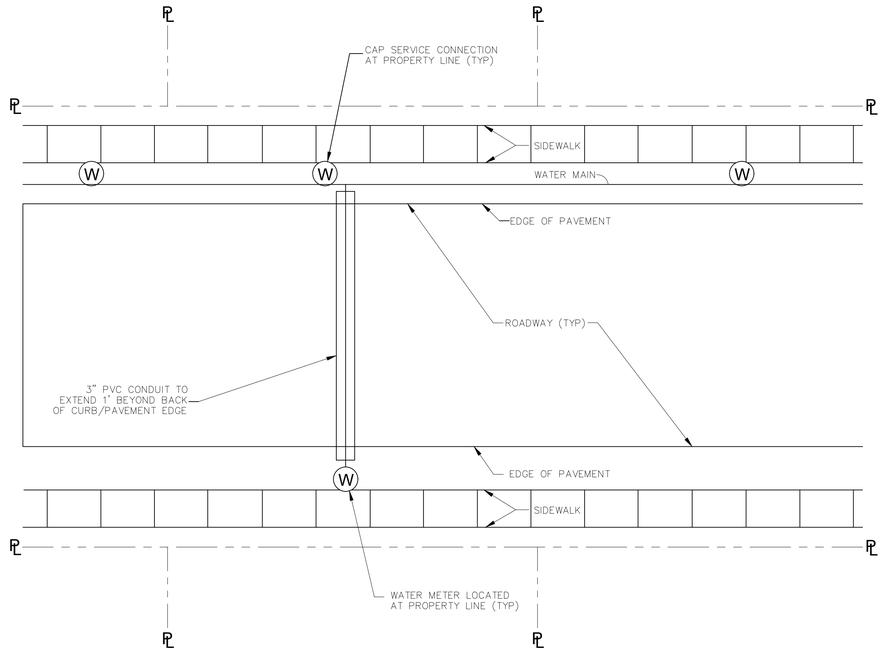
DRAWING NUMBER

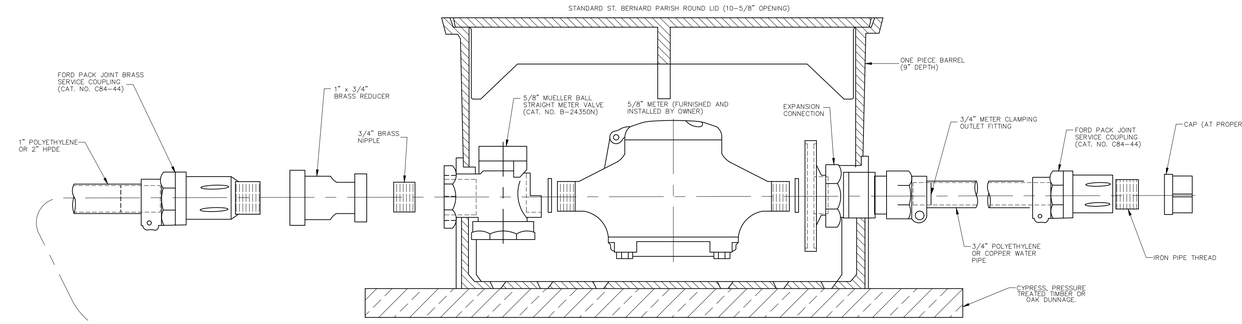
SD - 10

SHEET 10 OF 16



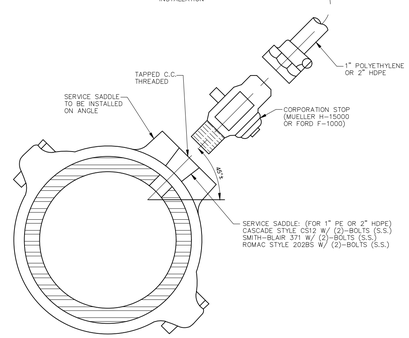
TYPICAL WATER SERVICE CONNECTION PLAN

N.T.S.



5/8" METER BOX INSTALLATION

N.T.S.

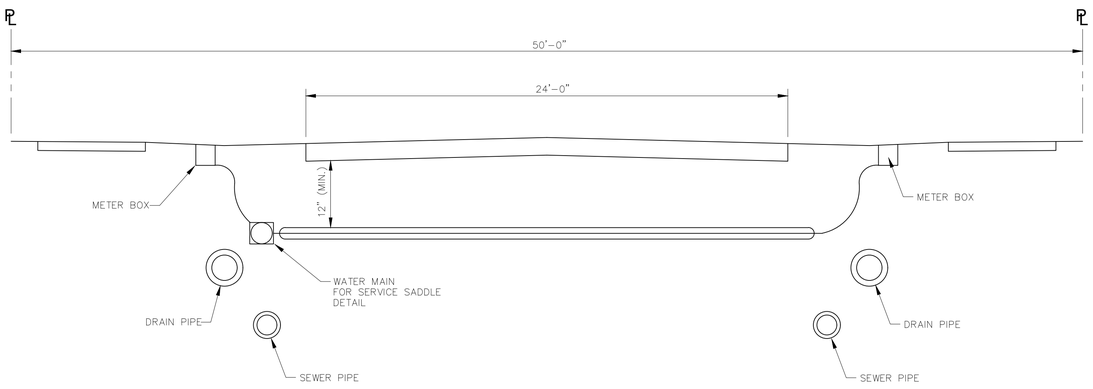


SERVICE SADDLE

N.T.S.

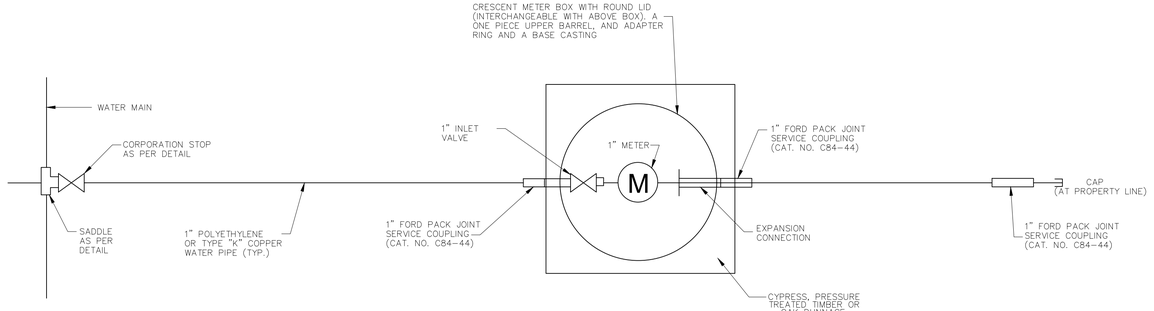
NOTES:

1. TUBING MATERIAL SHALL BE TYPE "K" COPPER OR POLYETHYLENE PR3406 AND SHALL CONFORM TO THE LATEST ISSUE OF ASTM D-2727 AND D-1248 FOR TYPE 3 OR 4 GRADE P-34 CLASS "C"
2. WATER SERVICE CONNECTION TO BE NEAR CENTERLINE OF LOT, MIN. OF 5' HORIZONTALLY FROM SEWER SERVICE CONNECTION.
3. ALL FITTING, CONNECTORS, CORPORATION STOPS AND APPURTENANCES SHALL BE OF DOMESTIC MANUFACTURE, SHALL BE MADE OF LEAD FREE MATERIALS, AND MEET ALL REQUIREMENTS OF AWWA, ASTM AND ANSI FOR USE IN THE POTABLE WATER DISTRIBUTION SYSTEMS.



TYPICAL UTILITY SECTION

N.T.S.



SCHEMATIC SKETCH
1" WATER METER SERVICE CONNECTION

N.T.S.

PROJECT NAME :

PROJECT NUMBER:

DATE	08.09.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
WATER SERVICE DETAILS

APPROVED BY

DATE

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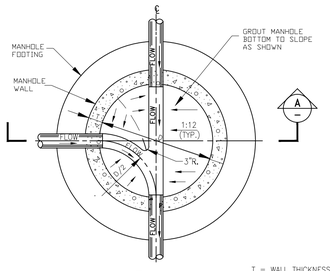
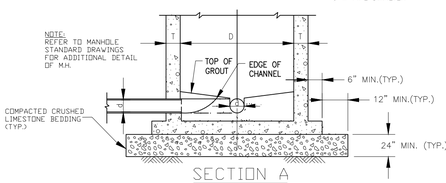
DRAWING NUMBER

SD - 11

SHEET 11 OF 16



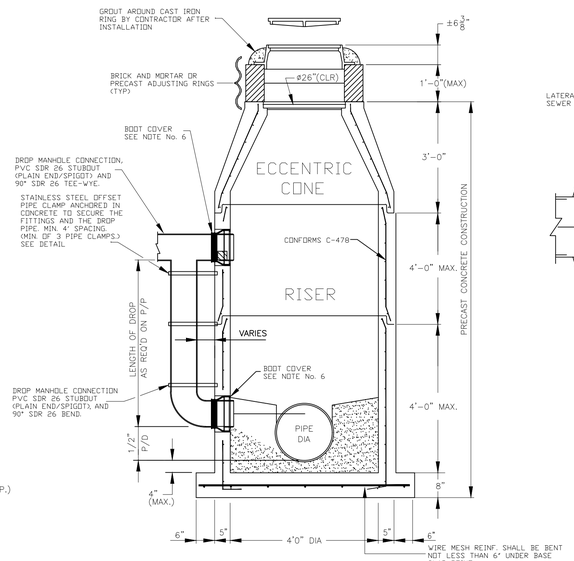
PLAN



SECTION A

TYPICAL SEWER MANHOLE BOTTOM

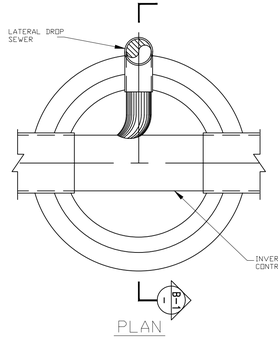
N.T.S.



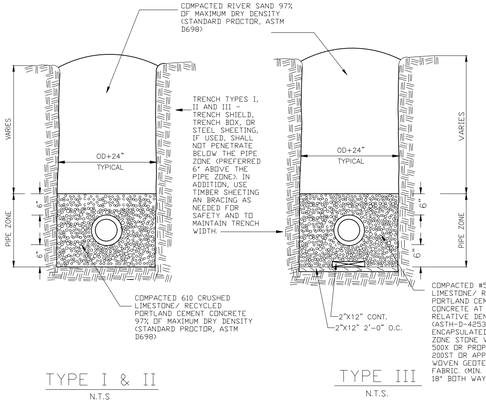
SECTION B-1

STANDARD DROP SEWER MANHOLE

N.T.S.



PLAN



TYPE I & II
N.T.S.

TYPE III
N.T.S.

TYPE IV
N.T.S.

TYPE V
N.T.S.

SANITARY SEWER STANDARD TRENCH DETAILS

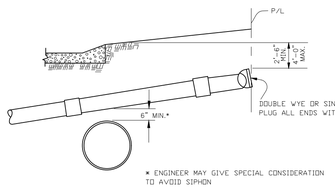
N.T.S.

NOTE:

TIMBER SHEETING AND BRACING SHOWN ABOVE ARE MIN. REQUIREMENTS TO CONTROL THE WIDTH OF THE EXCAVATED TRENCH AND TO SAFEGUARD THE INTEGRITY OF THE SEWER FOUNDATION, BEDDING AND BACKFILL. IN ADDITION TO THESE MIN. REQUIREMENTS, THE CONTRACTOR SHALL PROVIDE SUFFICIENT SHEETING AND BRACING TO PROVIDE SAFE WORKING CONDITIONS FOR HIS WORKMEN.

NOTES:

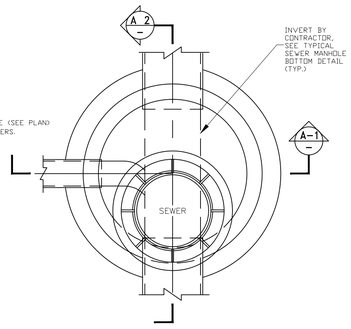
1. TRENCH CONSTRUCTION FOR THE GRAVITY SEWER LINES SHALL BE DETERMINED BY THE EXISTING SOIL TYPE AND DEPTH OF INSTALLATION.
2. ONLY HARDWOOD SUCH AS OAK SHALL BE ALLOWED FOR SHEETING, BRACING, AND FOUNDATION LUMBER.
3. AT THE CONTRACTOR'S OPTION, FOUNDATION LUMBER MAY NE USED IN TRENCH TYPES I & II.
4. THE CONTRACTOR MUST REVIEW AND UNDERSTAND ALL THE DETAILS ON THIS STANDARD DRAWING SHEET PRIOR TO BIDDING.



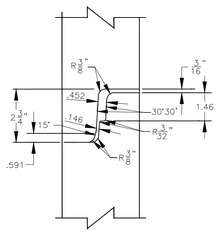
* ENGINEER MAY GIVE SPECIAL CONSIDERATION TO AVOID SIPHON

HOUSE CONNECTION OVER DRAIN

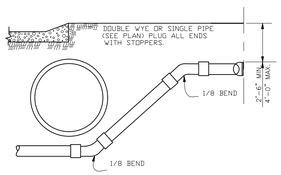
N.T.S.



PLAN



JOINT DETAIL

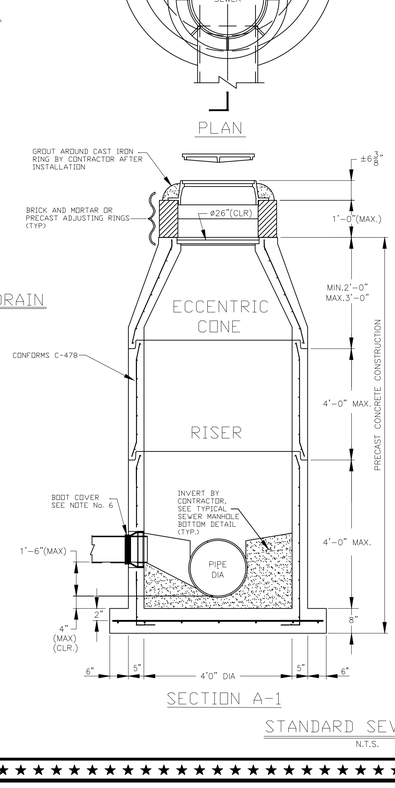


HOUSE CONNECTION UNDER DEEP DRAIN

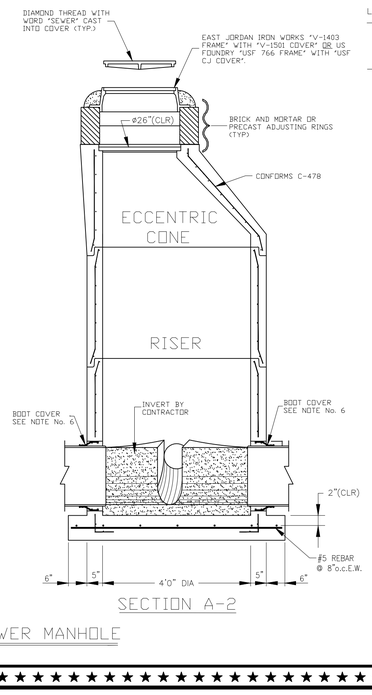
N.T.S.

NOTES:

1. REINFORCING STEEL TO MEET ASTM A-615 GRADE 60, CONCRETE TO BE 4000 PSI IN 28 DAYS.
2. CONCRETE TO CONTAIN ZYPEX ADMIX AS PER MANUFACTURER RECOMMENDATIONS.
3. REINFORCING TO MEET AASHTO HS-20 LOADING.
4. JOINTS BETWEEN PRECAST UNITS WILL BE SEALED WITH A RUBBER GASKET TO MEET ASTM C-443.
5. PRECAST CONCRETE STRUCTURES TO MEET ASTM C-478.
6. USE RESILIENT BOOT CONNECTORS TO CONNECT PIPES TO MANHOLES. RESILIENT BOOT CONNECTORS AND THEIR INSTALLMENT SHALL MEET AND/OR EXCEED ALL REQUIREMENTS OF ASTM C923, ASTM C1244, AND ASTM C1478.
7. MANHOLES THAT EXCEED 12 FT IN DEPTH SHALL USE 10" THICK CONC. BOTTOM SLAB.
8. XYPEX ADMIX C-1000 SHALL BE INCORPORATED INTO ALL MORTAR MIXES USED IN SANITARY SEWER MANHOLES.
9. ALL XYPEX ADMIX SHALL INCLUDE A DYE SO IT CAN BE DISTINGUISHED FROM CONCRETE WITHOUT XYPEX EXCEPT TOP SLAB OF LIFT STATION WET WELLS AND VALVE PITS WHICH SHOULD NOT HAVE ANY DYE IN THE XYPEX.
10. CONCRETE "FORTIFIED WITH CONSHIELD" (IN ADDITION TO XYPEX), IS REQUIRED FOR LIFT STATION WET WELLS, MANHOLES WITHIN CLOSE PROXIMITY (100 FT) OF LIFT STATION, DEEP (8 FT AND DEEPER) MANHOLES, AND NAY MANHOLE WHICH IS OR WILL BE RECEIVING A FORCE MAIN.
11. FIBERGLASS AS WELL AS BRICK, CAST-IN-PLACE AND PRECAST CONCRETE MANHOLES MAY BE SPECIFIED IF APPROVED BY ST. BERNARD PARISH ENGINEER PRIOR TO BIDDING. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, FOR MANHOLES, TO THE ST BERNARD PARISH PUBLIC WORKS DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION.



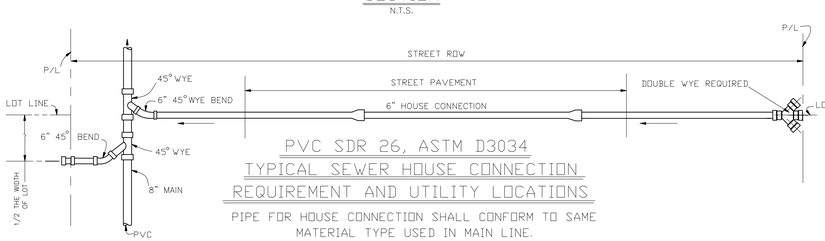
SECTION A-1



SECTION A-2

STANDARD SEWER MANHOLE

N.T.S.

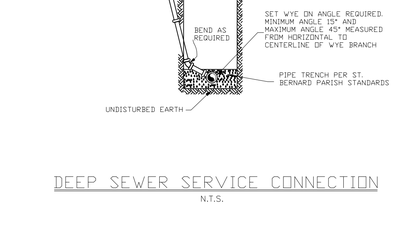


SECTION

N.T.S.

PVC SDR 26, ASTM D3034 TYPICAL SEWER HOUSE CONNECTION REQUIREMENT AND UTILITY LOCATIONS

PIPE FOR HOUSE CONNECTION SHALL CONFORM TO SAME MATERIAL TYPE USED IN MAIN LINE.

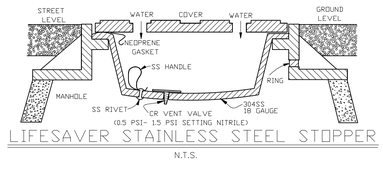


DEEP SEWER SERVICE CONNECTION

N.T.S.

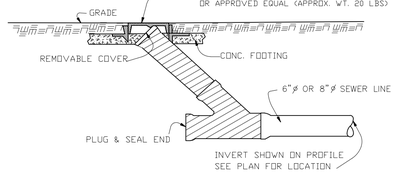
NOTE:

VERTICAL RISERS SHALL BE AVOIDED IF POSSIBLE. IF CONSTRUCTED, SPECIAL VERTICAL RISER SYSTEMS COMPONENTS (CONTROLLED SETTLEMENT JOINT, VERTICAL RISER ADAPTER, DEEP SOCKET & BEND, ETC.) SHALL BE USED AS PER ROYAL TRENDS MUNICIPAL SOLUTIONS' VERTICAL RISER SYSTEMS, OR APPROVED EQUAL. TEES OR TEE-WYES, WHICH ARE CONSTRUCTED OF VERTICAL RISERS SHALL BE SDR26 FITTINGS.



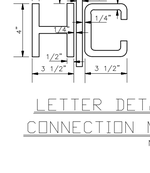
LIFESAVER STAINLESS STEEL STOPPER

N.T.S.



CLEANOUT DETAIL

N.T.S.



NOTE:

1. CONTRACTOR TO HAVE BRAND FABRICATED & SUBMIT TO ENGINEER FOR APPROVAL.
2. LETTERS TO BE IMPRESSED IN FACE OF ROLL OVER CURB AT EACH SEWER HOUSE CONNECTION. IMPRESSIONS SHALL NOT BE MORE THAN 1/2" NOR LESS THAN 1/4"

LETTER DETAIL FOR HOUSE CONNECTION MARKING DEVICE

N.T.S.

PROJECT NAME :

PROJECT NUMBER:

DATE	08.09.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT

STANDARD DETAIL PLANS

SEWER DETAILS

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DATE

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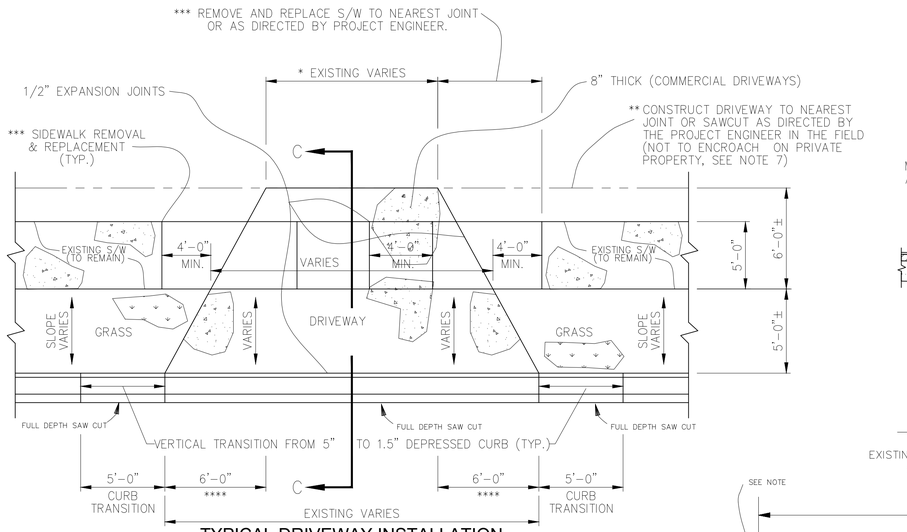
DRAWING NUMBER

SD - 12

SHEET 12 OF 16



TYPICAL DRIVEWAY INSTALLATION

SCALE: NONE

DRIVEWAY NOTES:

* 1) DRIVEWAY WIDTH SHALL BE AS DIRECTED BY PROJECT ENGINEER IN FIELD.

** 2) LIMITS OF DRIVEWAYS SHALL BE AS DIRECTED BY PROJECT ENGINEER IN THE FIELD.

*** 3) LIMITS OF SIDEWALK REMOVAL TO BE DETERMINED IN FIELD BY PROJECT ENGINEER.

4) DRIVEWAYS SHALL BE REINFORCED WITH 6" X 12" 0/1 WWF WEIGHTING 77#, PER 110 S.F.

**** 5) FLARE WIDTHS MAY HAVE TO BE ADJUSTED TO MEET FIELD CONDITIONS. PROJECT ENGINEER SHALL DIRECT CONTRACTOR IN FIELD.

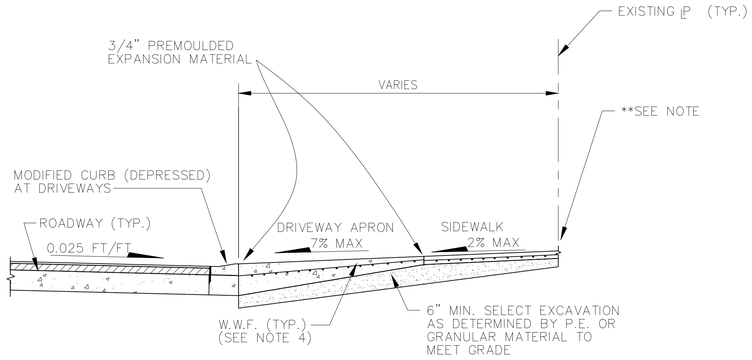
6) DRIVEWAY SLOPE SHALL NOT EXCEED 7% WITHOUT WRITTEN APPROVAL FROM PROJECT ENGINEER.

7) NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY UNLESS THE PARISH HAS OBTAINED A RIGHT OF ENTRY FROM THE PROPERTY OWNER.

8) MATCH EXISTING DRIVEWAY MATERIALS "IN KIND". (EXP. AGGREGATE, BRICK, ETC...) (N.D.P.)

9) IF PROJECT ENGINEER DETERMINES THAT TYPICAL DRIVEWAY DETAIL IS NOT FEASIBLE, CONTRACTOR TO REPLACE "IN KIND".

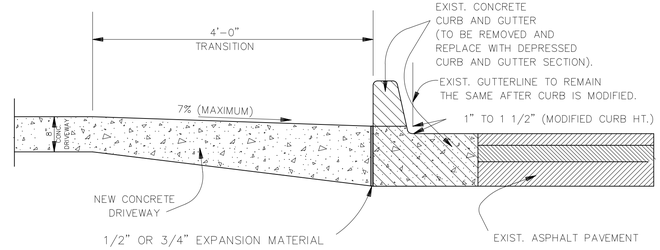
10) SIDEWALK AND DRIVEWAY APRON THICKNESS SHALL BE 8" FOR COMMERCIAL.



SECTION "C-C"

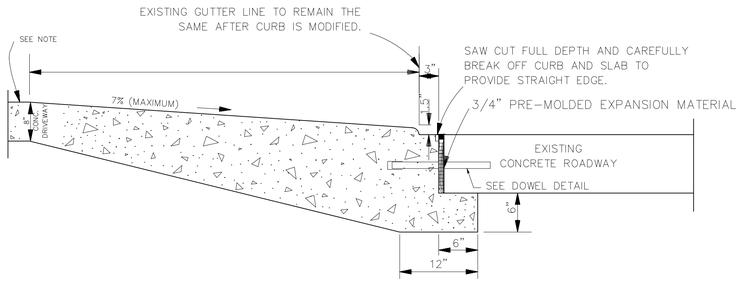
DRIVEWAY TYPICAL SECTION
SCALE: NONE

DETAIL "G"



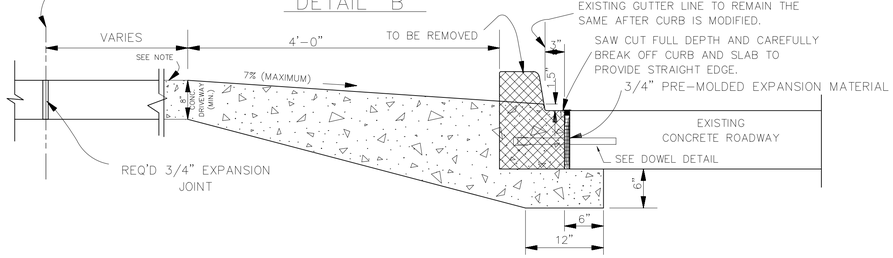
NEW DRIVEWAY CONNECTION TO EXISTING ASPHALT ROADWAY WITH CURB AND GUTTER

DETAIL "A"



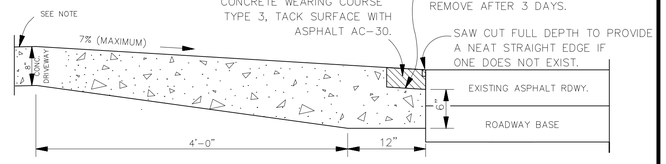
NEW COMMERCIAL DRIVEWAY CONNECTION TO EXISTING CONCRETE ROADWAY (DEPRESSED CURB)

DETAIL "B"



NEW DRIVEWAY CONNECTION TO EXISTING CONCRETE ROADWAY WITH BARRIER CURB (CURB TO BE REMOVED)

DETAIL "D-D"

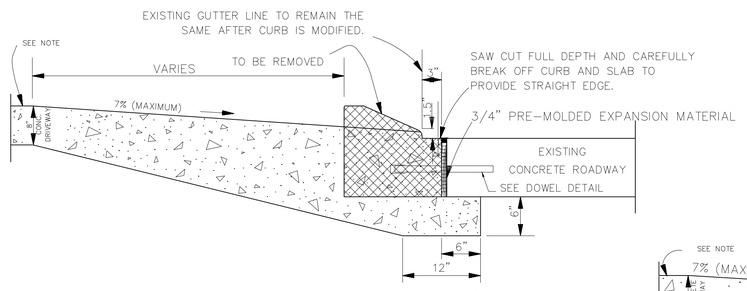


NEW DRIVEWAY CONNECTION TO EXISTING ASPHALT ROADWAY WITHOUT CURB.

CONCRETE ROADWAY BARRIER PROFILE

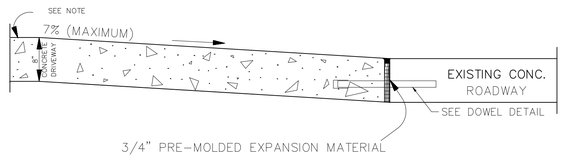
N.T.S.

DETAIL "C"



NEW DRIVEWAY CONNECTION TO EXISTING CONCRETE ROADWAY WITH ROLLOVER CURB (CURB TO BE REMOVED)

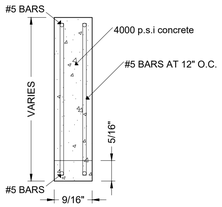
DETAIL "D"



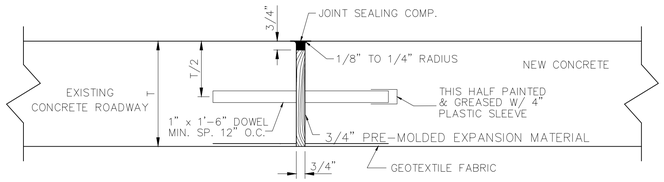
NEW DRIVEWAY CONNECTION TO EXISTING CONCRETE ROADWAY WITHOUT CURB

NOTE:

AN EXPANSION JOINT WILL BE REQUIRED ALONG RIGHT-OF-WAY (R.O.W.) LINE OR SERVITUDE LINE. (SEE DETAIL "B") (APPLICABLE IN ALL SITUATIONS).



SECTION A-A



DOWEL DETAIL

PROJECT NAME :

PROJECT NUMBER:

DATE	10.28.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
ROADWAY CONNECTION DETAILS
COMMERCIAL

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DATE

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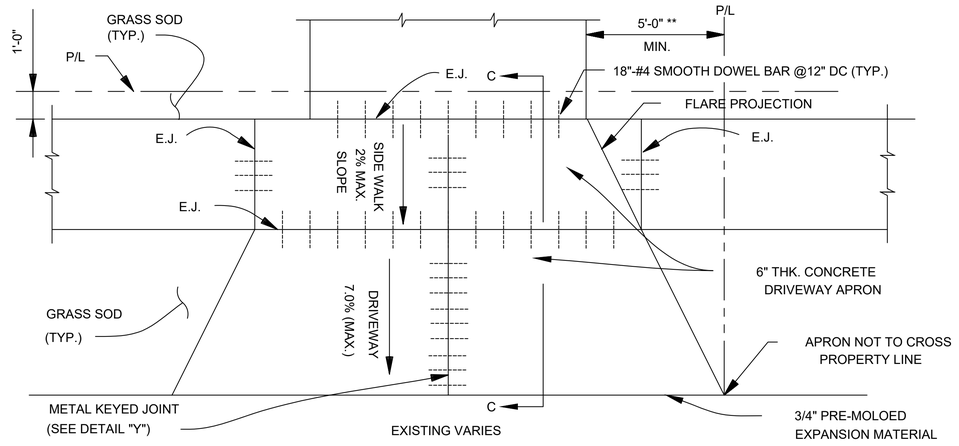
DRAWING NUMBER

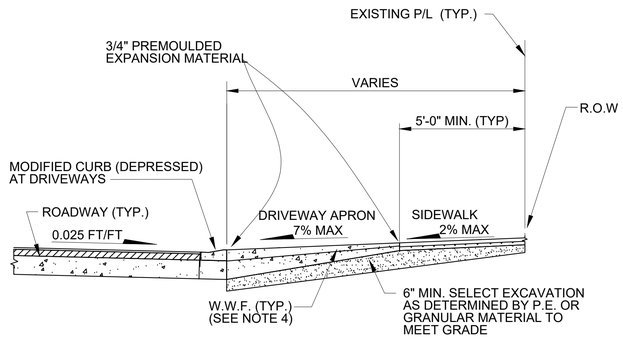
SD - 14

SHEET 14 OF 17



EXPANSION JOINT FOR NEW DRIVEWAY

DETAIL "A"

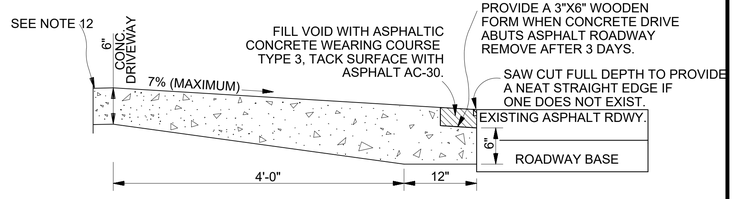


SECTION "C-C"

DRIVEWAY TYPICAL SECTION
SCALE: NONE

DETAIL "B"

DETAIL "A"



NEW DRIVEWAY CONNECTION TO
EXISTING ASPHALT ROADWAY WITHOUT CURB

(N.T.S.)

DRIVEWAY NOTES:

* 1) DRIVEWAY WIDTH SHALL BE AS DIRECTED BY PROJECT ENGINEER IN FIELD.

** 2) LIMITS OF DRIVEWAYS SHALL BE AS DIRECTED BY PROJECT ENGINEER IN THE FIELD.

*** 3) LIMITS OF SIDEWALK REMOVAL TO BE DETERMINED IN FIELD BY PROJECT ENGINEER.

4) DRIVEWAYS SHALL BE REINFORCED WITH 6" X 6"- D6.0 BY D6.0 WELDED WIRE FABRIC.

**** 5) FLARE WIDTHS MAY HAVE TO BE ADJUSTED TO MEET FIELD CONDITIONS. PROJECT ENGINEER SHALL DIRECT CONTRACTOR IN FIELD.

6) DRIVEWAY SLOPE SHALL NOT EXCEED 7% WITHOUT WRITTEN APPROVAL FROM PROJECT ENGINEER.

7) NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY UNLESS THE PARISH HAS OBTAINED A RIGHT OF ENTRY FROM THE PROPERTY OWNER.

8) MATCH EXISTING DRIVEWAY MATERIALS "IN KIND". (EXP. AGGREGATE, BRICK, ETC...) (N.D.P.)

9) IF PROJECT ENGINEER DETERMINES THAT TYPICAL DRIVEWAY DETAIL IS NOT FEASIBLE, CONTRACTOR TO REPLACE "IN KIND".

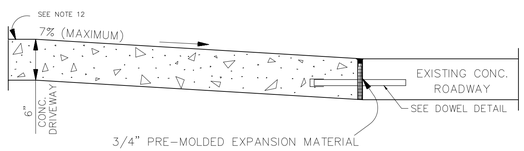
10) SIDEWALK AND DRIVEWAY APRON THICKNESS SHALL BE 6" FOR RESIDENTIAL.

11) TRANSITIONS WHERE SIDEWALKS MEET DRIVEWAYS SHALL NOT EXCEED THE MAXIMUM ALLOWABLE SLOPE OF 2.00%

12) EXPANSION JOINTS WILL BE REQUIRED ALONG RIGHT-OF-WAY (R.O.W.) LINE OR SERVITUDE LINE. (SEE DETAIL B) (APPLICABLE IN ALL SITUATIONS)

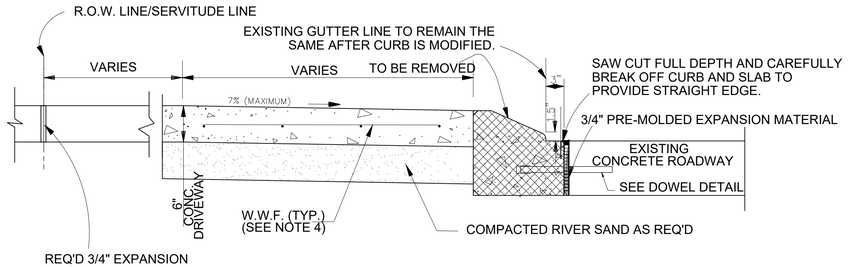
13) METAL KEYED JOINTS NEEDED FOR DRIVEWAYS GREATER THAN 16 FEET IN WIDTH

DETAIL "D"



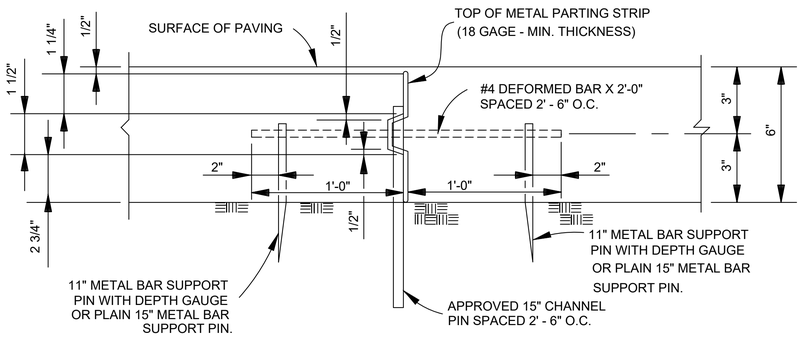
NEW DRIVEWAY CONNECTION TO
EXISTING CONCRETE ROADWAY WITHOUT CURB

(N.T.S.)



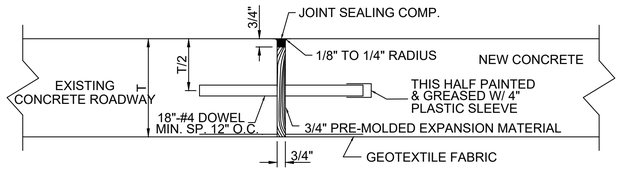
NEW DRIVEWAY CONNECTION TO EXISTING CONCRETE ROADWAY
WITH ROLLOVER CURB (CURB TO BE REMOVED)

(N.T.S.)



DETAIL "Y"

N.T.S.



EXPANSION JOINT DETAIL

PROJECT NAME :

PROJECT NUMBER:

DATE	10.28.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME:	S:\Public Works Shared\St. Bernard Standard Details

ST. BERNARD PARISH GOVERNMENT

STANDARD DETAIL PLANS

ROADWAY CONNECTION DETAILS

RESIDENTIAL

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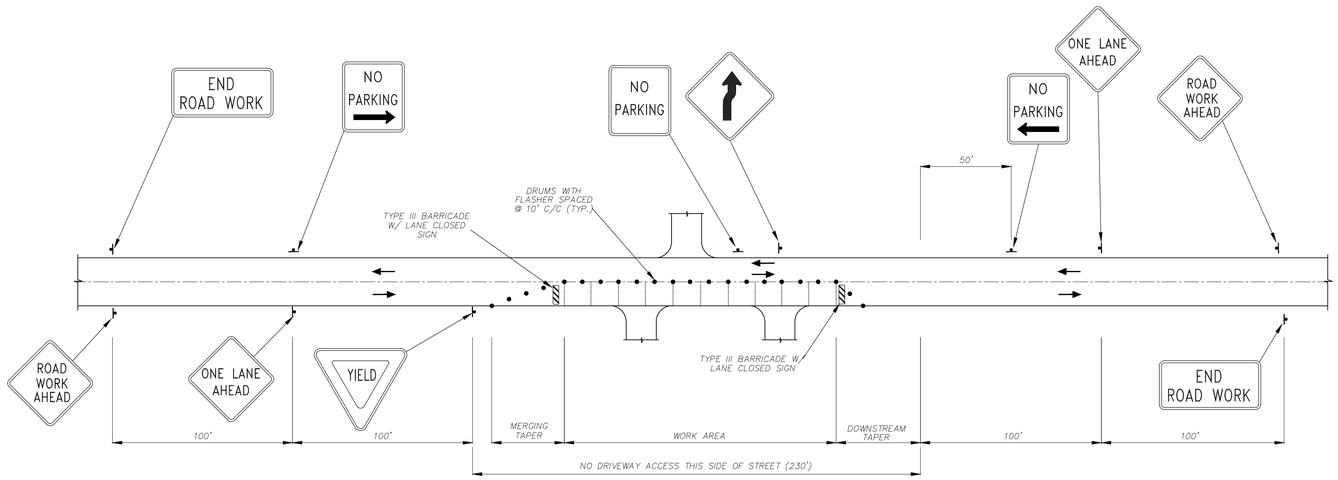
DRAWING NUMBER

SD - 15

SHEET 15 OF 17



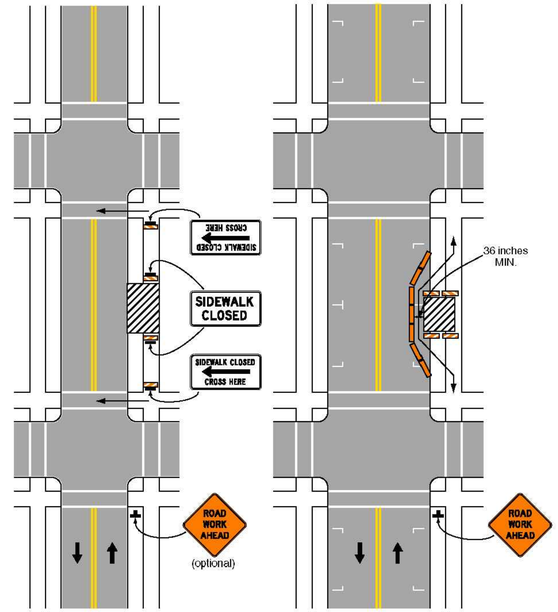
MINIMAL TEMPORARY TRAFFIC CONTROL FOR TWO WAY TRAFFIC ON A TWO WAY STREET (SEGMENT GREATER THAN 600')
N.T.S.

PLAN NOTES:

1) THE TEMPORARY TRAFFIC CONTROL PLANS ON THIS SHEET ARE ONLY TO SERVE AS THE MINIMUM REQUIRED. THE CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PLAN FROM A QUALIFIED TRAFFIC CONTROL ENGINEER. QUALIFICATIONS FOR THE TRAFFIC CONTROL ENGINEER SHALL INCLUDE AT LEAST FOUR (4) YEARS OF TRAFFIC ENGINEERING EXPERIENCE AND STATE OF LOUISIANA PROFESSIONAL REGISTRATION. THIS TRAFFIC CONTROL PLAN SHALL HAVE BEEN REVIEWED AND APPROVED BY THE ST. BERNARD PARISH TRAFFIC DIVISION PRIOR TO CONSTRUCTION.

2) THE DESIGN AND APPLICATION OF ALL TAPERS, DISTANCES, PAVEMENT MARKINGS, CHANNELIZATION DEVICES AND WARNING SIGNS SHALL CONFORM TO "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." LATEST EDITION.

Figure 6H-28. Sidewalk Detour or Diversion (TA-28)



Typical Application 28

Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Notes for Figure 6H-28—Typical Application 28
Sidewalk Detour or Diversion

Standard:

1. **When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**

Guidance:

2. *Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.*
3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*

Option:

4. Street lighting may be considered.
5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7. Type C Steady-Burn or Type D 360-degree Steady-Burn warning lights may be used on channelizing devices separating the temporary sidewalks from vehicular traffic flow.
8. Signs, such as KEEP RIGHT (LEFT), may be placed along a temporary sidewalk to guide or direct pedestrians.

TYPICAL SIDEWALK DETOUR PLAN
(MUTCD TA-28)

PROJECT NAME :

PROJECT NUMBER:

DATE	10.28.2019
DRAWN BY	MF/AR
SCALE:	NTS
FILENAME: S:\Public Works Shared\St. Bernard Standard Details	

ST. BERNARD PARISH GOVERNMENT
STANDARD DETAIL PLANS
TRAFFIC CONTROL DETAILS

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