SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT No. 3668

HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

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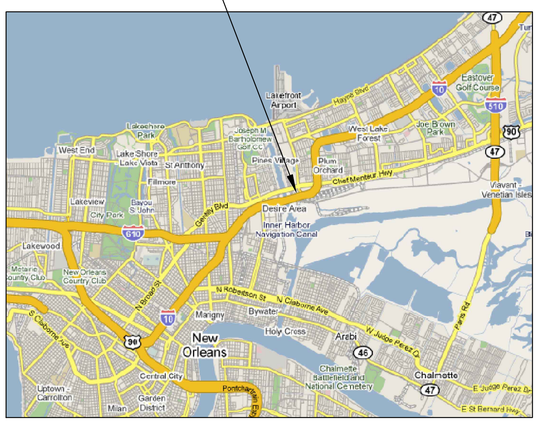
VICTORIA S.P.S.



VICINITY MAP

AREA MAP NO SCALE

CONFORMED DOCUMENTS FOR CONSTRUCTION

STATE OF LOUISIANA
John W. Hollefreve, Jr.
REG. No. 16383
REGISTERED
PROFESSIONAL
CIVIL ENGINEERING
9/24/2013

REV.	DATE	DESCRIPTION	BY

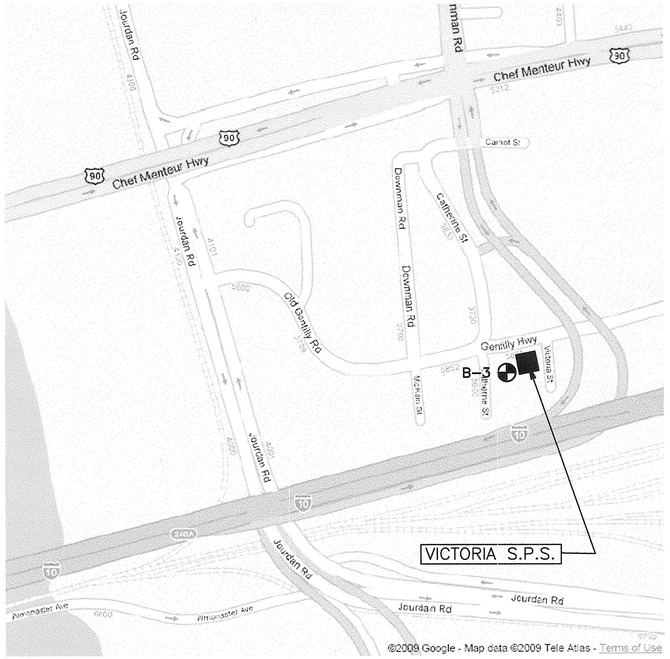
SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

TITLE SHEET

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. TH/BD	
TRC. --	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. JH	DWG. No. 12039–W–63
SCALE: AS SHOWN	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 1



3620 VICTORIA STREET

LOCATION MAP – VICTORIA S.P.S.

AREA MAP NO SCALE

GENERAL NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH EXISTING SITE CONDITIONS IN ORDER TO OBTAIN A FULL UNDERSTANDING OF WORK TO BE DONE.

2. PRIOR TO ANY DEMOLITION, CLEARING AND OR EXCAVATION (IF NEEDED), THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BY CALLING LOUISIANA ONE CALL AT 1–800–272–3020.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED TO EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE SWBNO.

4. CONTRACTOR SHALL CONTACT PROJECT MANAGER'S OFFICE IMMEDIATELY CONCERNING ANY CONFLICTS THAT ARISE DURING THE COURSE OF CONSTRUCTION ACTIVITIES.

5. THE EXISTING PUMPING STATION SHALL REMAIN IN SERVICE AS LONG AS POSSIBLE DURING CONSTRUCTION OF THE NEW STATION. WHEN THE EXISTING STATION IS NO LONGER OPERABLE, THE CONTRACTOR SHALL PROVIDE TEMPORARY BY–PASS PUMPING IN ACCORDANCE WITH SECTION 13 OF THE SPECIFICATIONS.

6. THE CONTRACTOR SHALL NOTIFY THE SWBNO AND THE PROGRAM MANAGER IF THEY PLAN TO WORK ON A SWBNO HOLIDAY OR A WEEKEND DAY. THE SWBNO HAS THE FINAL AUTHORIZATION ON WORK PERFORMED THAT IS NOT ON REGULAR WORK DAYS.

7. 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. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATIONS (POT–HOLING) TO DETERMINE THE LOCATION OF EXISTING UTILITIES AFFECTED BY THIS CONSTRUCTION AND SHALL REPORT HIS FINDINGS TO THE BOARD ENGINEER. THE CONTRACTOR SHALL INCLUDE IN HIS BID, EXPLORATORY EXCAVATIONS FOR A MINIMUM OF FIVE (5) LOCATIONS, HAVING A DEPTH RANGING FROM FIVE FEET TO TWELVE FEET.

8. ALL WORK SHALL CONFORM TO THE CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS (CNO–DPW), THE SEWERAGE AND WATER BOARD OF NEW ORLEANS(SWBNO), LOUISIANA DEPARTMENT OF PUBLIC HOSPITALS (DHH) AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.

9. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF DIRT AND DEBRIS FROM STREETS AND ROADWAYS AND PROJECT SITE GENERATED BY CONSTRUCTION ACTIVITIES.

10. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ADJACENT PAVEMENT AND FENCING WHICH RESULTS FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES AT NO ADDITIONAL. COST TO THE SWBNO.

11. CONTRACTOR SHALL CLEAN AND PAINT ALL EXPOSED SURFACES OF MECHANICAL EQUIPMENT, PIPING, PIPE SUPPORTS, AND OTHER ELEMENTS IN ACCORDANCE WITH SECTION 11 OF THE SPECIFICATIONS.

12. BUILDING SIZES AND MECHANICAL EQUIPMENT LAYOUTS INDICATED ON THESE DRAWINGS ARE BASED ON GORMAN–RUPP PUMPS AND BALDOR MOTORS. CONTRACTOR SHALL VERIFY PUMP STATION DIMENSIONS WITH EQUIPMENT MANUFACTURER'S SHOP DRAWINGS TO ENSURE PROPER FIT WITHIN THE STRUCTURE.

13. CONTRACTOR SHALL PROTECT ADJACENT PROPERTY AND IMPROVEMENTS FROM DAMAGE AND REPLACE ANY PORTIONS DAMAGED THROUGH HIS OPERATION AT HIS OWN EXPENSE. ALL REPAIR WORK SHALL BE TO THE SATISFACTION OF THE SWBNO.

14. CONTRACTOR SHALL RE–GRADE ALL AREAS ALTERED BY CONSTRUCTION ACTIVITIES TO PROVIDE POSITIVE DRAINAGE. ALL WORK SHALL BE IN A MANNER ACCEPTABLE TO THE SWBNO.

15. CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS ADVANCE NOTICE TO THOSE AFFECTED BY CONSTRUCTION ACTIVITIES THAT MAY DISRUPT WATER, SEWER, OR OTHER UTILITY SERVICES. UTILITY SERVICES SHALL BE PROMPTLY REPAIRED AND SHALL NOT REMAIN OUT OF SERVICE OVERNIGHT.

16. CONTRACTOR SHALL AT ALL TIMES CONDUCT HIS OPERATION TO ENSURE MINIMAL INCONVENIENCE TO THE GENERAL PUBLIC, ADJACENT PROPERTY OWNERS, AND BUSINESSES. CONTRACTOR SHALL PROVIDE AND MAINTAIN ACCESS TO ALL PROPERTIES AND TRAFFIC FLOW IN ROADWAYS AT ALL TIMES.

17. ALL GRASS AREAS ALTERED SHALL BE SEEDED, FERTILIZED, WATERED, AND MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE PROJECT. CONTRACTOR SHALL WATER DAILY FROM SEEDING UNTIL 2 WEEKS AFTER GERMINATION.

18. THE CONTRACTOR SHALL CONTACT THE FOLLOWING ENTITIES AT LEAST FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES:

    SEWERAGE AND WATER BOARD OF NEW ORLEANS

    BKI: DENNIS GARRARD 504–486–5901

    LOUISIANA ONE CALL – 1–800–272–3020

19. ALL MISCELLANEOUS METAL WORK, INCLUDING PIPE SUPPORTS AND BRACKETS TO BE INSTALLED WITHIN THE WET WELL SHALL BE MANUFACTURED ENTIRELY OF TYPE 316 STAINLESS STEEL. LIKEWISE, ALL FASTENERS, INCLUDING ANCHOR BOLTS INSTALLED WITHIN THE WET WELL SHALL BE MANUFACTURED OF STAINLESS STEEL. THREADS OF ALL STAINLESS STEEL FASTENERS SHALL BE TREATED WITH AN ANTI–SEIZE COMPOUND FORMULATED FOR USE WITH STAINLESS STEEL, SUCH AS "PURE NICKEL SPECIAL ANTI SEIZE COMPOUND", MANUFACTURED BY "NEVER–SEEZ", OR EQUAL.

20. COMPLETED INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS, LOCAL CODES, AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.

21. ALL ELECTRICAL EQUIPMENT SHALL BE FURNISHED AND INSTALLED OR RELOCATED TO EXISTING FACILITIES, IN ACCORDANCE WITH SECTION 15 OF THE SPECIFICATIONS.

22. NAMEPLATES CONTAINING PERTINENT DATA SHALL BE INSTALLED ON ALL THE EQUIPMENT THAT IS INSTALLED BY THE CONTRACTOR.

23. TESTING SHALL BE PERFORMED BY QUALIFIED TESTING AGENCIES AND FIELD SERVICE COMPANIES AS NECESSARY TO AUGMENT THE CONTRACTOR'S OWN CAPABILITIES. TESTING AND REPORTING METHODS SHALL COMPLY WITH APPLICABLE CITY OF NEW ORLEANS STANDARDS. ALL TEST RESULTS SHALL BE PUBLISHED ON THE CONTRACTOR'S OR TESTING COMPANY'S LETTERHEAD OR TEST FORMS BEARING THE LEGAL NAME AND ADDRESS OF THE COMPANY.

24. THE NEW STRUCTURES SHOWN ARE TO BE TIED INTO EXISTING PIPING. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS SHOWN ON THE DRAWINGS THAT RELATE TO NEW WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OR CONSTRUCTION.

25. CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS (CNO–DPW) STANDARD DRAWINGS ARE AVAILABLE FROM THE CNO–DPW ENGINEERING DIVISION, CITY HALL, 1300 PERDIDO STREET, ROOM 6W03, NEW ORLEANS, LOUISIANA 70012, OR ONLINE AT www.nola.gov.

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
REGISTERED
PROFESSIONAL ENGINEER
IN
ENGINEERING
6/5/12

REV.	DATE	DESCRIPTION	BY

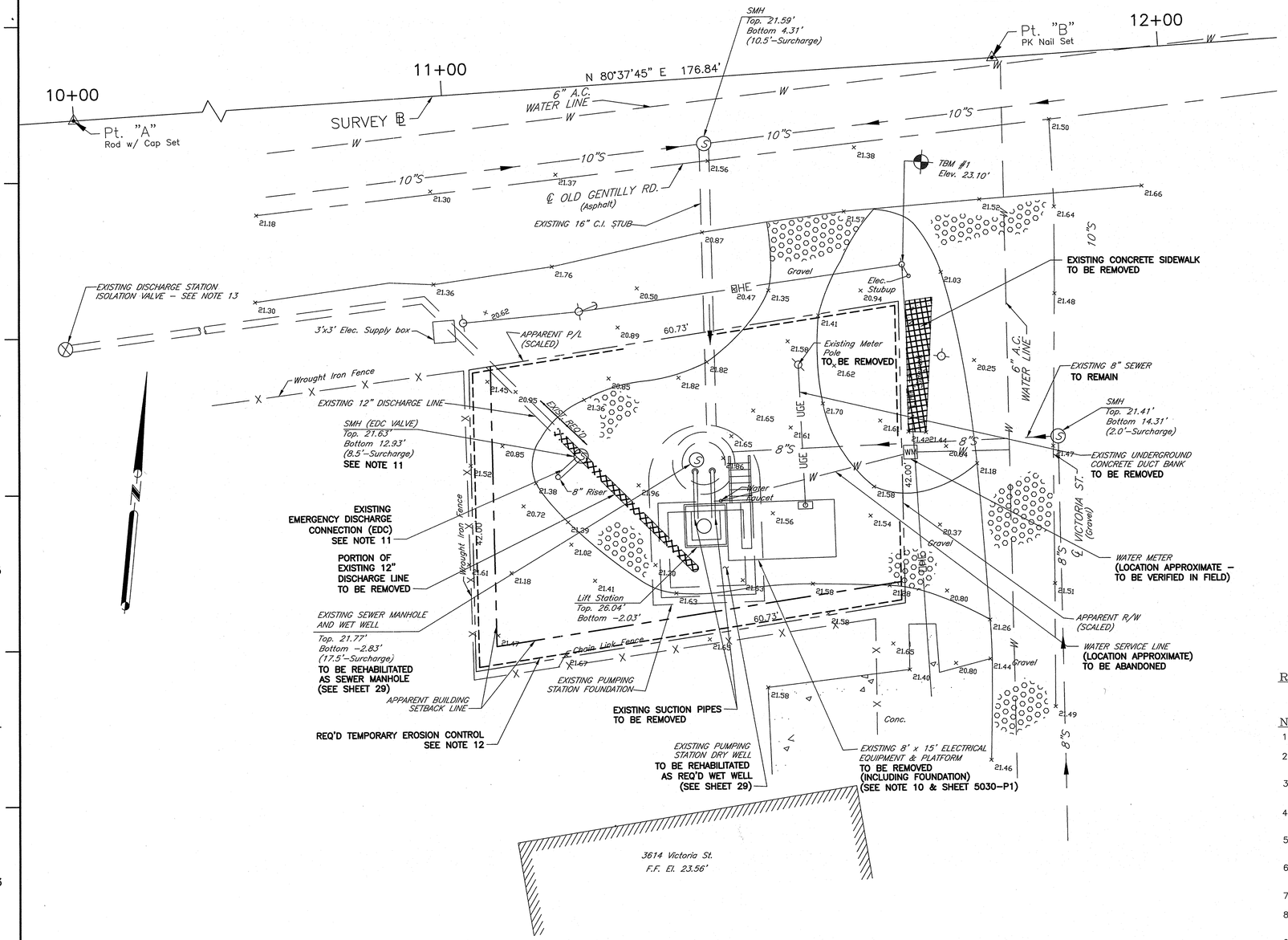
SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

LOCATION MAP/GENERAL NOTES

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836–2155

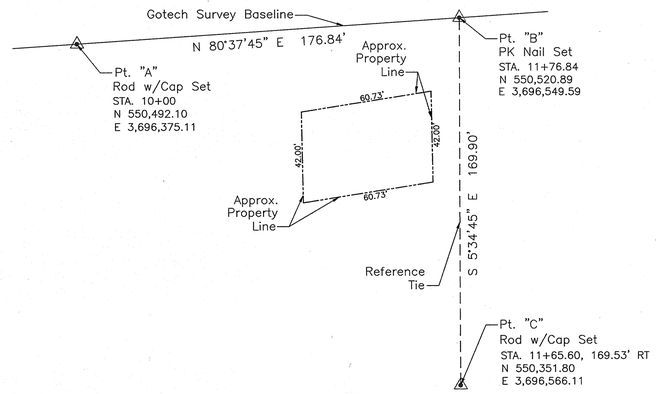
DR. TH/BD	
TRC. – –	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. JH	
SCALE: AS SHOWN	DWG. No. 12039–W–63
DATE: JANUARY 2012	SET NO. / SHEET NO. 2



LEGEND

- Light Pole
- Power Pole
- Guy Anchor
- Drain Manhole
- Isolation Valve
- Sanitary Sewer Manhole
- Station Tower
- Survey Baseline Point
- Sign
- Fire Hydrant
- Bollard
- Elevation Shot
- Gravel
- Existing Fence
- Overhead Power Line
- Underground Power Line
- Sanitary Sewer Line
- Water Service Line
- REQ'D TEMPORARY EROSION CONTROL
- REMOVAL OF STRUCTURES, OBSTRUCTIONS, AND SIDEWALKS

TBM #1 - 80d NAIL IN P.P. CORNER OF VICTORIA ST. AND OLD GENTILLY RD.,ELEV. = 23.10 CAIRO DATUM.



Survey Baseline Location Detail
N.T.S.

REFERENCES:

GOTECH FIELD BOOK 274.

NOTES:

1. DISTANCES AND COORDINATE VALUES SHOWN ARE IN FEET BY HORIZONTAL MEASUREMENT.
2. HORIZONTAL COORDINATES SHOWN ARE LOUISIANA LAMBERT SOUTH ZONE GRID SYSTEM COORDINATES BASED ON NATIONAL GEODETIC SURVEY'S ONLINE POSITIONING USER SERVICE (OPUS) PROCESSING OF GPS OBSERVATION DATA COLLECTED ON 7/8/2009 & PROCESSED ON 7/9/2009.
3. VERTICAL DATUM IS CAIRO DATUM ADJUSTED FROM NAVD88 DATUM OBTAINED FROM OPUS PROCESSING OF GPS OBSERVATION DATA COLLECTED ON 7/8/2009 & PROCESSED ON 7/9/2009.
4. TBM #1 - 80d NAIL IN P.P. CORNER OF VICTORIA ST. AND OLD GENTILLY RD., ELEV. = 23.10 CAIRO DATUM (BASED ON NAVD88). CONTRACTOR SHALL VERIFY ELEVATION BEFORE USING.
5. TOPOGRAPHIC SURVEY SITE LOCATED IN FLOOD ZONE B BASED ON THE FLOOD INSURANCE RATE MAPS FOR THE CITY OF NEW ORLEANS & ORLEANS PARISH, LA. - COMMUNITY PANEL NO. 225203-0115E, REVISED 3/1/84.
6. SEWER MANHOLES WERE SURCHARGED AND THE SURVEY CREW WAS UNABLE TO OBTAIN ANY INVERT ELEVATIONS OR SIZES OF PIPES ENTERING OR EXITING THE STRUCTURE.
7. HIGH WATER MARK ELEV. 27.88' CAIRO DATUM OBSERVED @ 3614 VICTORIA ST.
8. BASE FLOOD ELEVATION (B.F.E.) = NONE (ZONE B). BFE TAKEN FROM ELEVATION CERTIFICATE PREPARED BY DUFRENE SURVEY AND ENGINEERING, INC., DATED JANUARY, 2010.
9. 500-YEAR FLOOD ELEVATION=ELEV. 22.73 CAIRO DATUM. 500-YEAR FLOOD ELEVATION TAKEN FROM FEMA FLOOD INSURANCE STUDY, DATED SEPTEMBER 1, 1983.
10. SEE SHEETS 32-34 FOR PLATFORM AND PLATFORM FOUNDATION DRAWINGS. THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY.
11. AT THE CONTRACTOR'S OPTION, THE EXISTING EMERGENCY DISCHARGE CONNECTION (EDC) AND MANHOLE SHALL EITHER REMAIN IN PLACE OR BE MOVED TO AN INTERIM LOCATION DURING CONSTRUCTION OF THE NEW STATION. THE INTERIM LOCATION SHALL BE APPROVED BY THE BOARD ENGINEER. A NEW EDC, AS SHOWN ON THESE PLANS, SHALL BE REQUIRED AT THE NEW PUMPING STATION.
12. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL AT PROPERTY LINES ALONG THE SITE. SEE SECTION 3 OF THE SPECIFICATIONS FOR TEMPORARY EROSION CONTROL REQUIREMENTS.
13. THE EXISTING STATION ISOLATION VALVE FOR DISCHARGE FORCE MAIN IS LOCATED AT THE ALMONASTER OVERPASS, GENTILLY ROAD EXTENSION.

STATE OF LOUISIANA
John W. Hollereve, Jr.
REG. No. 16383
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
6/5/12

CIVIL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

SITE PLAN - EXISTING CONDITIONS AND DEMOLITION

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. TH/BD
TRC. ----
CK. DS/CW
AP. JH
SCALE: AS NOTED
DATE: JANUARY 2012

GENERAL SUPERINTENDENT

DWG. No. 12039-W-63

SET NO. SHEET NO. 3

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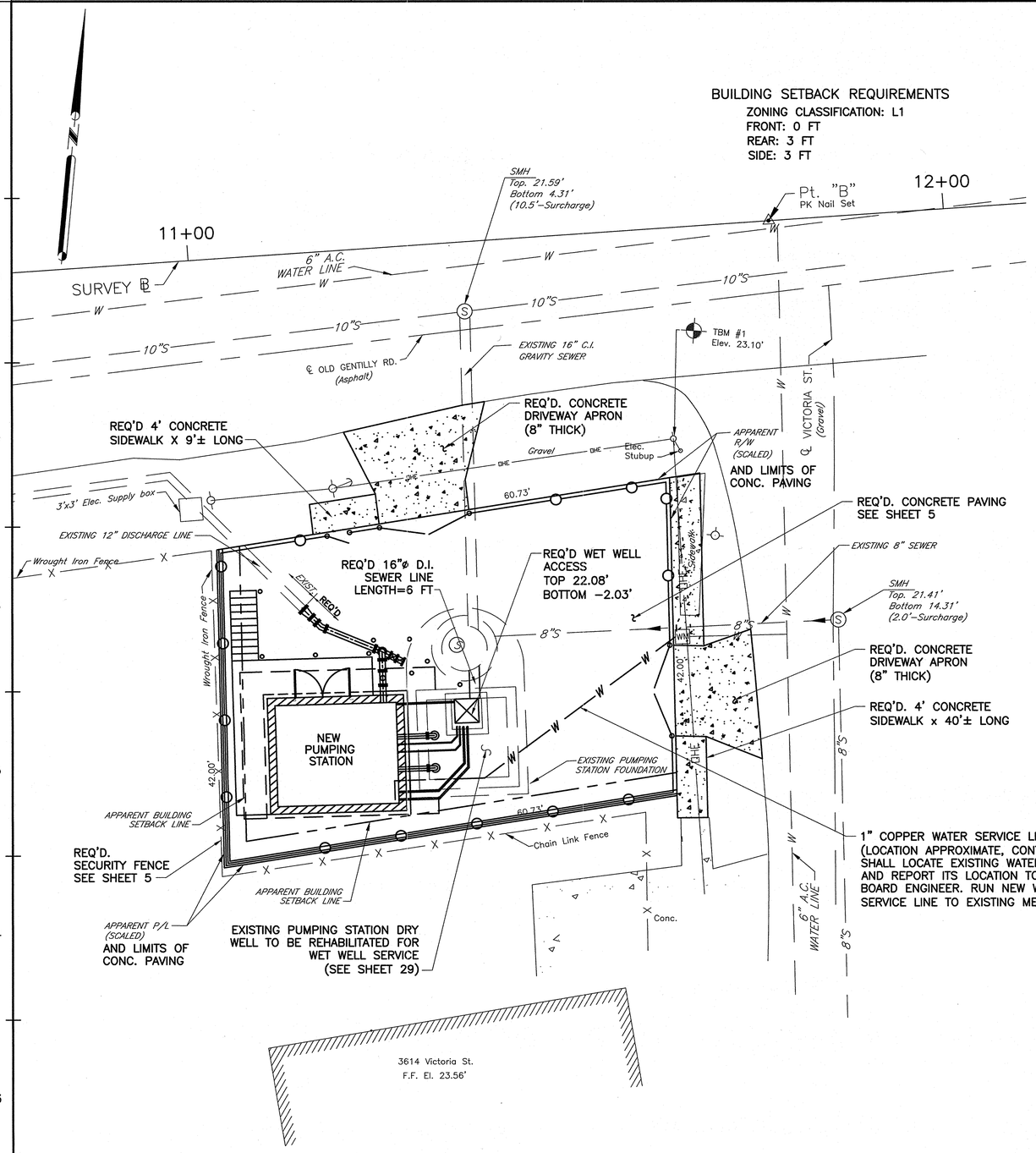
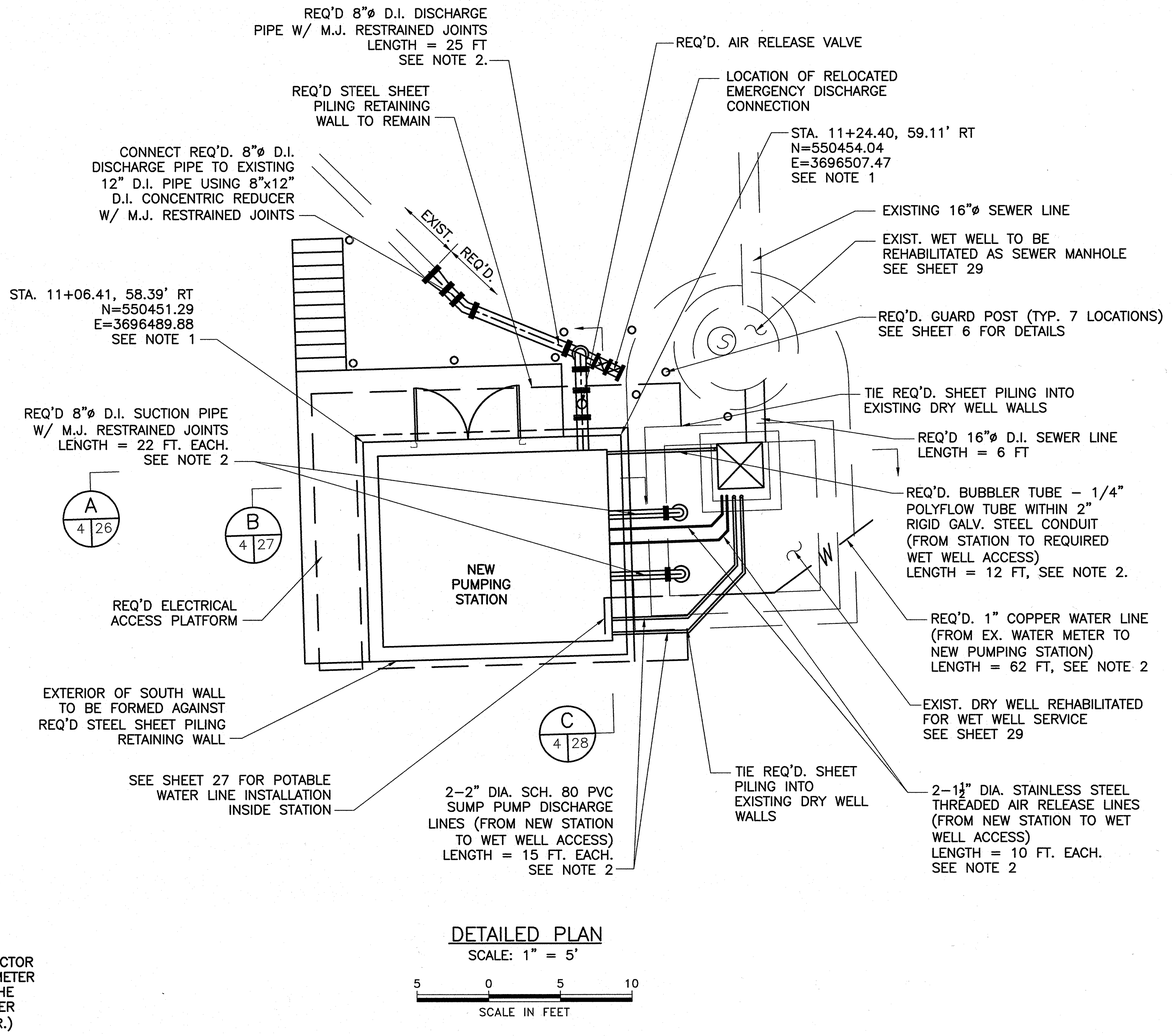


SITE PLAN–REQUIRED STATION AND PIPING

SCALE: 1" = 10'

10 0 10 20

SCALE IN FEET



DETAILED PLAN

SCALE: 1" = 5'

5 0 5 10

SCALE IN FEET

NOTES:

1. STATIONING AND COORDINATES GIVEN TO EXTERIOR CORNERS OF PUMP PIT CONCRETE WALLS. SEE SHEET 3 FOR SURVEY LINE DETAILS FOR BASIS OF STATIONING AND COORDINATES.
2. PIPE LENGTH ONLY INCLUDES YARD PIPING, AND DOES NOT INCLUDE PIPING INSIDE STATION.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL DETERMIME THE EXACT LOCATION, DEPTH AND SIZE OF EXISTING DISCHARGE PIPING IN ORDER TO DETERMINE THE REQUIRED TIE–IN CONFIGURATION FOR THE REQUIRED DISCHARGE PIPING AND SHALL REPORT TO THE ENGINEER ANY INCONSISTENCIES FROM WHAT IS SHOWN.

LEGEND

- Light Pole
- Power Pole
- Guy Anchor
- Drain Manhole
- Sanitary Sewer Manhole
- Station Tower
- Survey Baseline Point
- Sign
- Fire Hydrant
- Bollard
- + 20.00 Elevation Shot

- X X X X Existing Fence
- OHE Overhead Power Line
- UGE UGE UGE Underground Power Line
- SS SS SS *Sanitary Sewer Line*
- W W W W *Existing Water Service Line*
- W W W W **REQ'D WATER SERVICE LINE**
- 8"S 8"S 8"S 8"S **REQ'D SEWER LINE**
- **REQ'D WOOD FENCE**

TBM #1 – 80d NAIL IN P.P. CORNER OF VICTORIA ST. AND OLD GENTILLY RD., ELEV. = 23.10 –CAIRO DATUM.

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
5/13

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SITE PLAN–REQUIRED STATION AND PIPING

DR. TH/BD	
TRC. ——	GENERAL SUPERINTENDENT
CK. DS/CW	
AP. JH	DWG. No. 12039–W–63
SCALE: AS SHOWN	
DATE: JANURARY 2012	SET NO. / SHEET NO. 4

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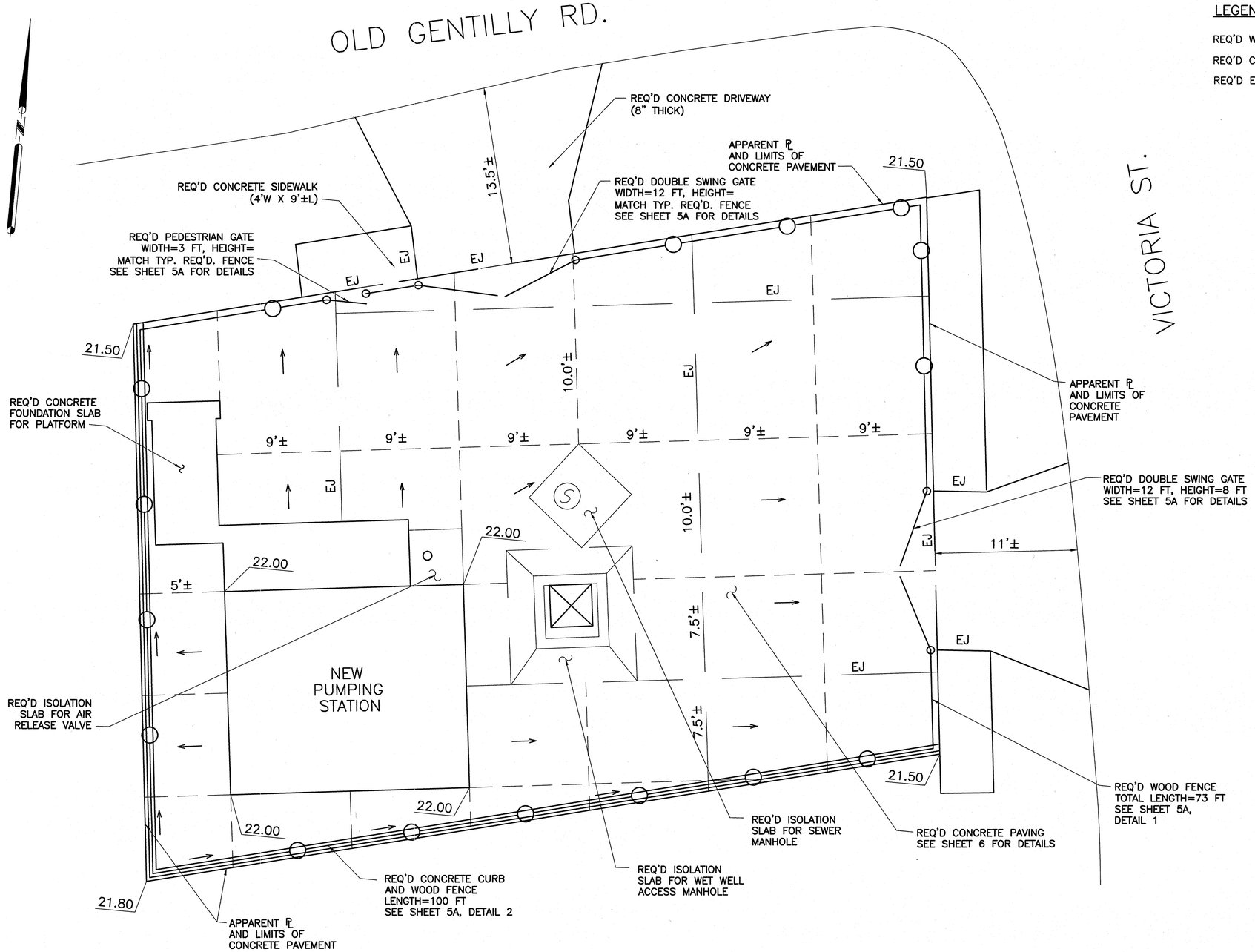

LEGEND:

REQ'D WOOD FENCE

REQ'D CONTROL JOINTS

REQ'D EXPANSION JOINTS

NOTES:

1. PAVING JOINTS SHALL BE IN ACCORDANCE WITH THE CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS.
2. REQUIRED ELEVATIONS ARE TO THE TOP OF CONCRETE PAVEMENT.
3. LOCATIONS OF PAVING JOINTS AND ISOLATION SLABS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL PROVIDE PAVING PLAN FOR APPROVAL PRIOR TO CONSTRUCTION.
4. SEE SHEETS 5A FOR FENCING DETAILS.
5. ACTUAL LOCATION OF GATES SHALL BE DETERMINED IN THE FIELD.

SITE PAVING AND FENCING PLAN
SCALE: 1/4" = 1'-0"

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
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PROFESSIONAL ENGINEER
CIVIL ENGINEERING
6/5/13

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CONTRACT 3668
HURRICANE KATRINA RELATED
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SITE PAVING AND FENCING PLAN

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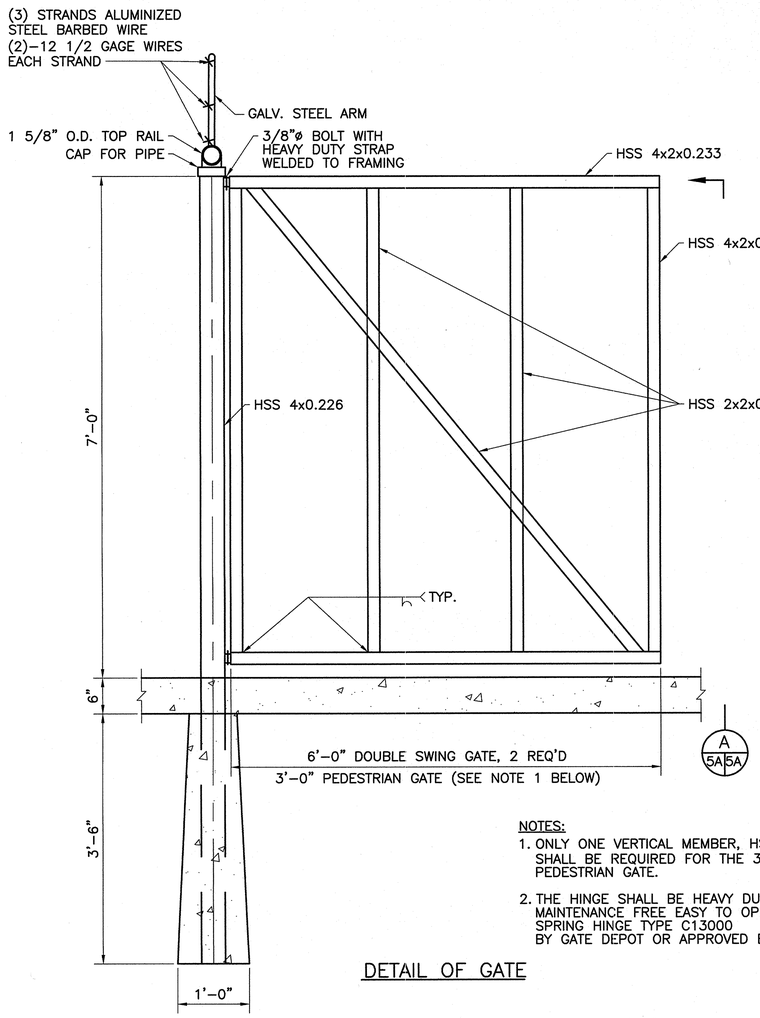
Suite 205
Metairie, LA 70002
(504) 836-2155

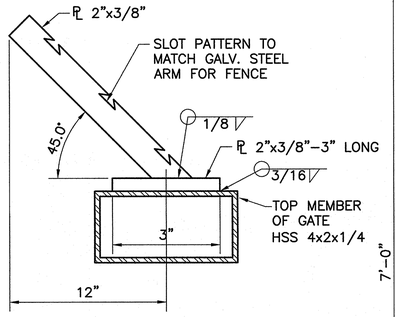
DR. TH/BD
TRC. ---
CK. DS/CW
AP. JH
SCALE: AS SHOWN
DATE: JANURARY 2012

GENERAL SUPERINTENDENT

DWG. No. 12039-W-63

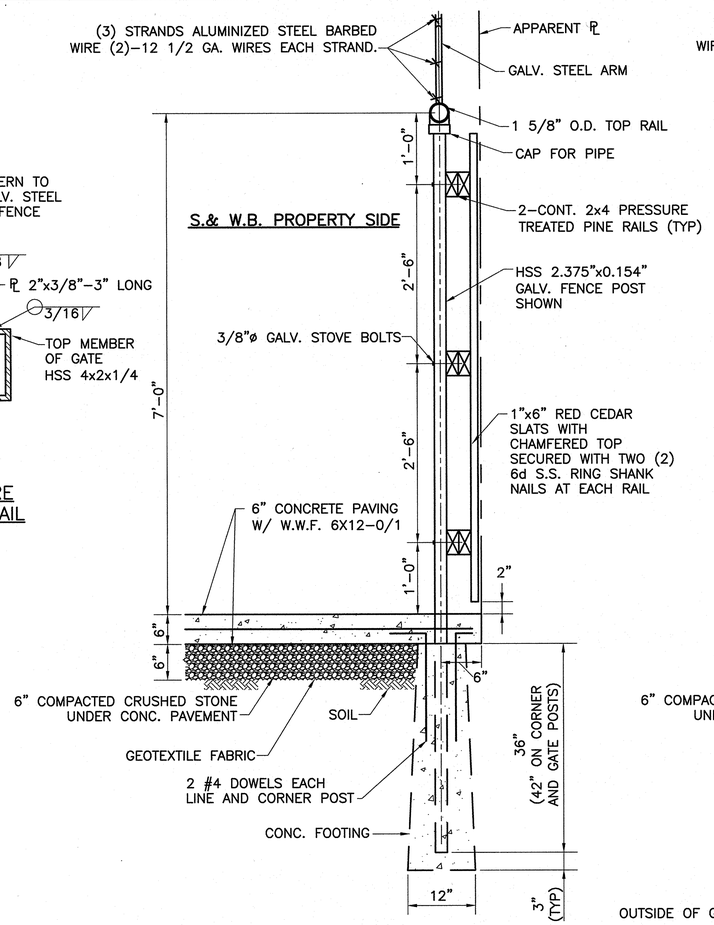
SET NO.
SHEET NO. 5





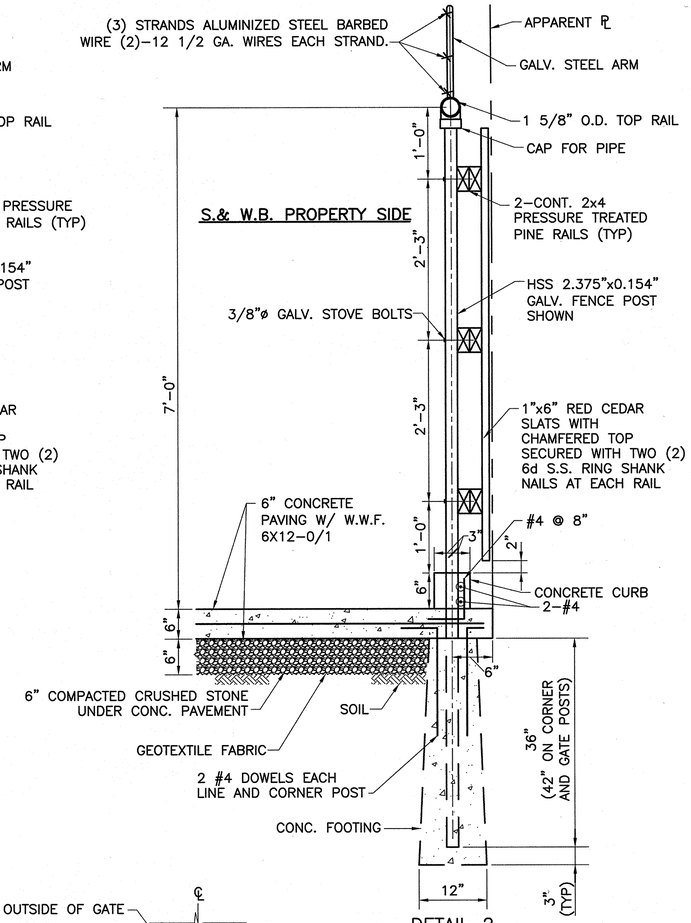
GATE BARBED WIRE SUPPORT ARM DETAIL

SCALE: 1" = 1'–0"



DETAIL 1
TYPICAL SECURITY FENCE
(ALONG NORTH & EAST SIDES OF SITE)

SCALE: 1" = 1'–0"



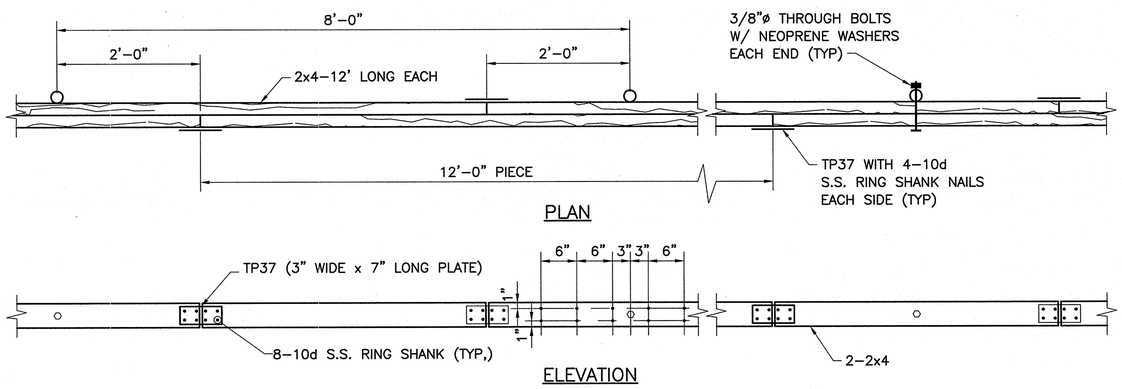
DETAIL 2
TYPICAL SECURITY FENCE WITH NEW CONCRETE CURB
(ALONG SOUTH & WEST SIDES OF SITE)

SCALE: 1" = 1'–0"

NOTES:

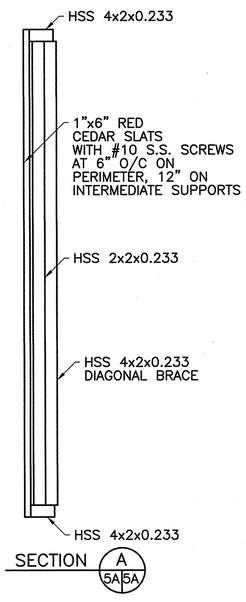
1. ONLY ONE VERTICAL MEMBER, HSS 2x2x0.233, SHALL BE REQUIRED FOR THE 3'–0" WIDE PEDESTRIAN GATE.
2. THE HINGE SHALL BE HEAVY DUTY HINGE, MAINTENANCE FREE EASY TO OPERATE, SPRING HINGE TYPE C13000 BY GATE DEPOT OR APPROVED EQUAL

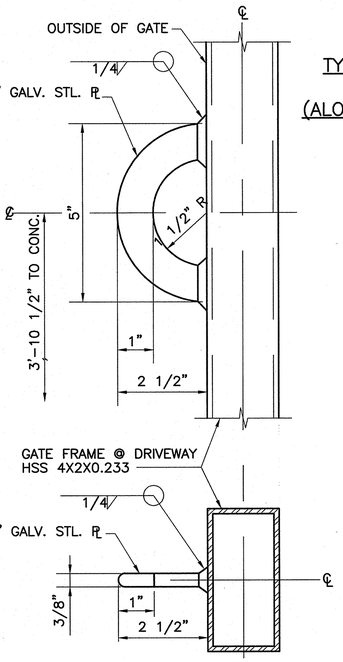
DETAIL OF GATE



TYPICAL RAIL SPLICE LOCATION

SCALE: 1" = 1'–0"





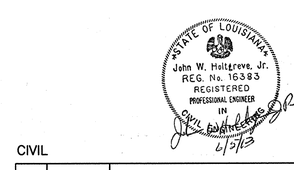
PLAN
(2 REQ'D.)

DETAIL OF PAD EYES FOR CHAIN LOCK

SCALE: 6" = 1'–0"

WOOD FENCE NOTES:

1. OVERALL HEIGHT OF FENCE: 8' (7' WOOD SLAT, 1' OF BARBED WIRE)
2. LINE POST: HSS GALV. PIPE, 2.375" O.D., 0.154" THICKNESS, SET NOT LESS THAN 36" IN CONC. AS SHOWN
3. CORNER POST: HSS GALV. PIPE, 2.875" O.D., 0.203" THICKNESS, SET NOT LESS THAN 42" IN CONC. AS SHOWN
4. GATE POST: HSS GALV. PIPE, 4.00" O.D., 0.226" THICKNESS, SET NOT LESS THAN 42" IN CONC. AS SHOWN
5. BARBED WIRE: (3) STRANDS OF ALUMINIZED STL. SET ON GALV. STL. ARMS. USE A 4 POINT PATTERN BARBED WIRE ON 3" CENTERS, (2) 12–1/2" GA WIRES PER STRAND. GALV. STEEL ARM SHALL NOT EXTEND BEYOND PROPERTY LINE (P/L).
6. TOP RAIL: 1–5/8" O.D. GALV. PIPE
7. BRACING (CORNER & GATE POSTS): 1–5/8" O.D. GALV. PIPE
8. DIAGONAL BRACE (GATE): HSS GALV. TUBE 4x2x0.233
9. GATES SHALL BE PROVIDED WITH 1/2"ø KEEPER BARS, FORMED LATCH AND PADLOCK EYE.
10. SLATS: RED CEDAR WITH A CHAMFERED TOP, TREATED WITH WATER REPELLENT PRESERVATIVE, WITH STAINLESS STEEL FASTENERS.
11. RAILS: TWO (2) 2–INCH x 4 INCH x 12–FOOT PRESSURE TREATED NO. 2 PRIME, OR BETTER, SOUTHERN PINE LUMBER
12. GATE FRAME: HSS GALVANIZED TUBE 2x2x0.233.



CIVIL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

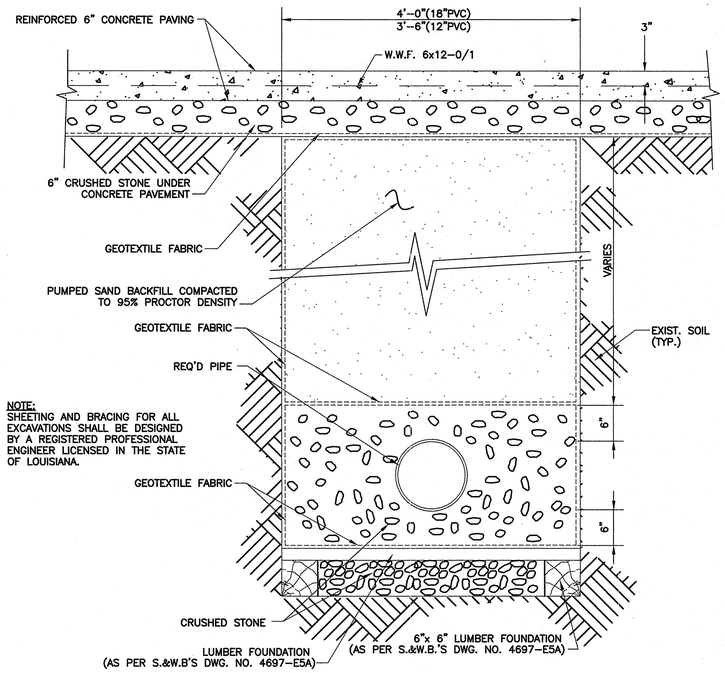
CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

WOOD FENCING DETAILS

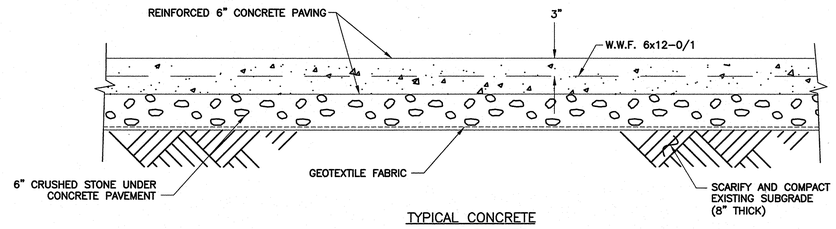
DR. TH/BD	
TRC. -----	GENERAL SUPERINTENDENT
CK. DS/CW	
AP. JH	DWG. No. 12039–W–63
SCALE: AS NOTED	SHEET NO. 5A
DATE: JANURARY 2012	SET NO.

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836–2155

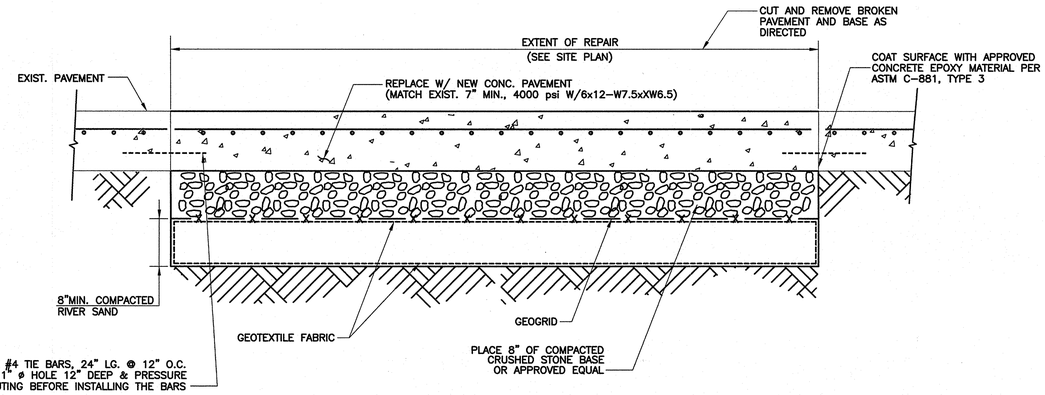
PRINTED May 31, 2013 – 9:04am FILENAME – J:\6005.1–GOSHEP–2013\Contract 3668 – Victoria SPS\SHT 5A_VIC_EXSITE–FENCE–DET.dwg



TYPICAL NEW SEWER TRENCH
UNDER CONCRETE PAVING ON SITE
N.T.S.



TYPICAL CONCRETE
PAVING ON SITE
N.T.S.



PAVEMENT REPAIR IN STREET
N.T.S.

NOTE:
FOR REPAIRS TO PAVEMENTS OTHER THAN CONCRETE, SEE CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS, LATEST REVISION.

SITE PAVING NOTES

1. SEE SECTION 3 OF THE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.

DRIVEWAY NOTES

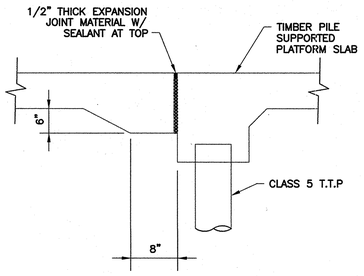
1. FOR DRIVEWAY DETAILS, SEE CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS STANDARD DRAWING STD8 (SEE SHEET 2, NOTE 25).

STREET REPAIR NOTES

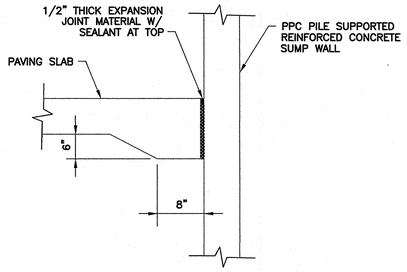
1. SEE SECTION 3 OF THE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
2. ALL CONSTRUCTION REQUIRED IN STREET SHALL BE IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND WITH THE LATEST EDITIONS OF THE CITY OF NEW ORLEANS DEPARTMENT OF STREETS GENERAL SPECIFICATIONS FOR STREET PAVING AND STANDARD PLANS STD1 THRU STD15.
3. THE AREA OF STREET REPAIRED INDICATED ON THE SITE PLAN SHALL BE SUBJECT TO APPROVAL BY THE CITY OF NEW ORLEANS DEPARTMENT OF PUBLIC WORKS.
4. ALL NEW STREET SURFACES SHALL MATCH EXISTING ROADWAY GRADES.
5. THICKNESS OF NEW CONCRETE PAVEMENT SHALL BE THE GREATER OF 7" MIN. OR THICKNESS OF EXIST. PAVEMENT.
6. THICKNESS OF NEW ASPHALT WEARING SURFACE SHALL BE THE GREATER OF 1 1/2" MIN. OR THICKNESS OF EXIST. SURFACE.
7. IF LIMITS OF REPAIR ARE WITHIN 3'-0" OF A JOINT, THEN REPLACE THE PAVEMENT TO THE NEAREST JOINT.

CONCRETE NOTES

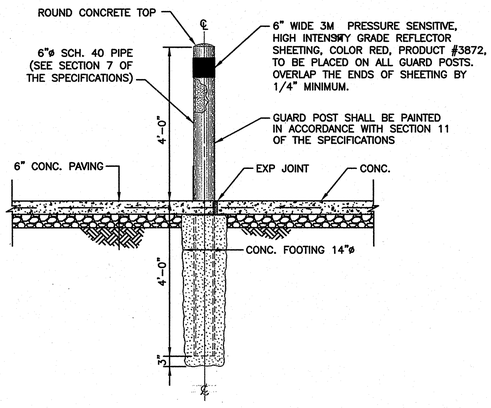
1. NON-STRUCTURAL CONCRETE SHALL ATTAIN A STRENGTH OF 3000 PSI AT 28 DAYS.
2. ALL REINFORCING MESH SHALL CONFORM TO ASTM A-185.
3. CONCRETE STRUCTURAL DESIGN IS BASED UPON THE LATEST EDITION OF ACI 318.
4. CHAMFER ALL EXPOSED CONCRETE EDGES EXPOSED TO VIEW 3/4" UNLESS NOTED OTHERWISE.



TYPICAL SECTION @ PAVING /
PILE SUPPORTED PLATFORM SLAB
N.T.S.



TYPICAL SECTION @ PAVING SLAB /
PUMP PIT WALL JUNCTION
N.T.S.



GUARD POST DETAIL
N.T.S.

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
REGISTERED
PROFESSIONAL ENGINEER
5/31/13

CIVIL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

MISCELLANEOUS SITEWORK DETAILS

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. TH/BD	
TRC. --	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. JH	DWG. No. 12039-W-63
SCALE: AS SHOWN	
DATE: JANUARY 2012	SET NO. / SHEET NO. 6

SEWER NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLATION OF NEW SEWER MAINS, MANHOLES, HOUSE CONNECTIONS, ETC., REQUIRED BY THESE DRAWINGS AND SPECIFICATIONS. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM WITH THE GENERAL SPECIFICATIONS OF THE SEWERAGE AND WATER BOARD EXCEPT AS NOTED HEREINAFTER.

2. FOR ANY PIPES INSTALLED IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE CHIEF OF NETWORKS OF THE S&WB IN WRITING NOT LESS THAN THREE NOR MORE THAN TEN DAYS IN ADVANCE OF STARTING THE JOB SO AS TO SCHEDULE THE INSPECTION OF THE WORK. FAILURE TO DO SO PRIOR TO STARTING WORK WILL REQUIRE THE CONTRACTOR TO EXPOSE THE BEDDING ON ALL PIPE PREVIOUSLY INSTALLED. COPIES OF THE NOTICE TO START WORK SHALL BE SENT TO THE GRAVITY SYSTEM SUPT. AT 2900 PEOPLES AVENUE.

3. SEWER MAINS AND INTERCONNECTING MANHOLES SHALL BE INSTALLED AT ELEVATIONS INDICATED UNLESS CHANGED BY THE S&WB ENGINEER. "BLIND MANHOLE" WILL NOT BE ALLOWED; ALL MAINS MUST BE LAID CONTINUOUSLY AND FROM THE LOW END OF THE SYSTEM. DEPTHS OF SEWER MAINS FOR PAYMENT PURPOSES SHALL BE DETERMINED BY MEASUREMENT FROM THE INVERT TO THE TOP OF CASTINGS AT FINISH GRADE OF CONNECTING MANHOLES.

4. MATERIAL FOR SEWER MAINS SHALL BE SOLID WALL POLYVINYL CHLORIDE (PVC) PIPE. PIPE SECTIONS AND FITTINGS SHALL HAVE A BELL HOUSING GASKETED JOINT SOLVENT WELDED TO THE PIPE AT THE FACTORY.

   THE ELASTOMERIC GASKETS SHALL BE AS RECOMMENDED BY THE MANUFACTURER, AND ASTM D-3212 AND SHALL BE GLUED OR HELD IN PLACE BY RETAINER RINGS.

   THE SOLID WALL PVC PIPE 6" THROUGH 15" SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM D3034 SPECIFICATIONS AND TO A PIPE DIMENSION RATIO (SDR) OF 26 (SEE PAR. 16). THE FITTINGS AND BELL STOCK FOR SOLID WALL PVC PIPE SHALL HAVE A SOLID WALL PVC PIPE OF THE SAME INSIDE DIAMETER.

   PVC SEWER MAINS SIZES 18" THROUGH 27" SHALL BE SOLID WALL PVC PIPE CONFORMING WITH ASTM F-679, CLASS T-1 WITH DIMENSIONS AS SHOWN IN PARAGRAPH 16 HEREIN UNLESS STATED OTHERWISE ON THE APPROVED LENGTH WITH INTEGRAL CAST BELLS AND ELASTOMERIC GASKETS AS RECOMMENDED BY THE MANUFACTURER AND ASTM D-3212.

5. BEDDING AND FOUNDATIONS FOR MAINS SHALL CONFORM WITH S&WB DWG. 4697-E5A REV. 10 EXCEPT AS NOTED BELOW.

   STANDARD SHEETING & BRACING SHALL COMPLY WITH DWG. 4697-E5A REV.10. ALTHOUGH THE CONTRACTOR SHALL HAVE THE OPTION OF INSTALLING ANY OF THE ABOVE TYPE PIPE MATERIALS THE SAME TYPE AND SIZE MUST BE INSTALLED BETWEEN MANHOLES.

6. INSTALLATION OF THE SOLID WALL PVC PIPE SHALL CONFORM WITH SECTION D, "THE CONSTRUCTION OF SEWERS" AND PLASTIC PIPE ASSOCIATION SPECIFICATION UNI-B-78, "RECOMMENDED PRACTICE FOR THE INSTALLATION OF POLYVINYL CHLORIDE (PVC) SEWER PIPE. THE TRENCH BOTTOM SHALL BE RELATIVELY SMOOTH AND FREE FROM ROCKS, ROOTS, ETC. AFTER THE SHEETING AND/OR FOUNDATION LUMBER IS PLACED THE PIPE SHALL BE LAID ON A SMOOTH BED OF CRUSHED STONE.

   THE CRUSHED STONE SHALL BE EXTENDED UNDER, AROUND AND 6" OVER THE TOP OF THE PIPE COMPACTED IN LAYERS NOT GREATER THAN 6" BY A MECHANICAL VIBRATING COMPACTOR (APPROVED BY THE BOARD'S ENGINEER) UNTIL A MINIMUM OF 85% STD PROCTOR DENSITY IS ATTAINED FOR THE FULL WIDTH OF THE TRENCH: ALL AS SHOWN ON S&WB DWGS. 4697-E5A REV. 10 OR REV. 2. THE CRUSHED STONE SHALL BE PLACED AND CONSOLIDATED UNDER THE PIPE HAUNCHES TO PROVIDE MAXIMUM SIDE SUPPORT TO THE PIPE WHILE AVOIDING DISPLACEMENT AND MISALIGNMENT OF THE PIPE. IN LIEU OF SHELL EMBEDMENT MATERIAL SHALL BE CLASS I ANGULAR MATERIAL (¼" TO 1½"). ASTM 2321 (LATEST EDITION); I.E., CORAL, SLAG, CINDERS, CRUSHED CONCRETE OR CRUSHED STONE. THE BOARD RESERVES THE RIGHT TO APPROVE THE TYPE OF MATERIAL. THE MAXIMUM ALLOWED DEFLECTION FOR INSTALLED PVC SEWER PIPE IS 7 PERCENT REDUCTION IN ITS ACTUAL VERTICAL INSIDE DIAMETER NOT THE MINIMUM ALLOWED BY THE ASTM SPECIFICATION. PIPE EXCEEDING THIS ALLOWED DEFLECTION AT ANY TIME PRIOR TO ACCEPTANCE, SHALL BE REMOVED AND REPLACED WITH NEW PIPE AND REINSTALLED AS PER THE ABOVE SPECIFICATIONS AT THE CONTRACTORS EXPENSE.

   A MINIMUM OF 100% OF THE P.V.C. SOLID WALL PIPE WILL BE MANDRELED. THE CONTRACTOR WILL INSTALL THE PULL LINES AND PASS THE MANDREL THROUGH THE MAINS SELECTED BY THE ENGINEER. TEST WILL BE WITNESSED BY THE CONTRACTOR AND THE ENGINEER. THE SEWERAGE AND WATER BOARD WILL PROVIDE THE MANDRELS FOR ALL TESTS AND HAVE THE OPTION OF PASSING THE MANDRELS AT ANY TIME AFTER INSTALLATION AND FINAL BACKFILL OF THE TRENCHES AND BEFORE FINAL ACCEPTANCE. THE CONTRACTOR SHALL BEAR THE COST OF ANY RETESTING IF REQUIRED AND WILL BE ASSESSED $100 FOR EACH OCCURRENCE IN EACH SECTION BETWEEN MANHOLES.

7. MANHOLE SHALL CONFORM WITH SECTION D OF THE GENERAL SPECIFICATION AND DRAWING NO. 6178-B6 REV. 8. PRECAST MANHOLES SHALL ALSO CONFORM WITH ASTM C-478 EXCEPT WHERE SHOWN ON THE DRAWINGS. SHORT SECTIONS OF PIPE WITH BELL FITTING AND WATER STOPS AS RECOMMENDED BY THE MANUFACTURER AND AS SHOWN ON DRAWING NO. 6312-E5 SHALL BE USED AS CONNECTORS FOR BRICK MANHOLES.

   PRECAST MANHOLE CONNECTIONS SHALL UTILIZE KOR-N-SEAL BOOTS. MANHOLE STEPS MUST CONFORM WITH DWGS. NO. 6178-B6.

8. HOUSE CONNECTIONS SHALL BE SIX-INCH PIPE EXTENDED TO THE PROPERTY LINE AS SHOWN ON DWGS. 6187-E5. THE USE OF SADDLES IN ALL TYPES OF PIPE SYSTEMS WILL NOT BE PERMITTED; ALL SUCH CONNECTIONS SHALL BE MADE WITH THE USE OF FITTINGS. ALL PIPE AND FITTINGS SHALL BE OF THE SAME MATERIALS AS THE MAIN SEWER UNLESS APPROVED BY THE S&WB. HOUSE CONNECTIONS SHALL HAVE A MINIMUM OF 3½ FEET AND MAXIMUM OF 4 FEET OF COVER MEASURED FROM TOP OF CURB. THE 6" DIAMETER SEWER HOUSE CONNECTION PIPE SHALL BE SOLID WALL PVC PLASTIC PIPE HAVING A MINIMUM WALL THICKNESS OF SDR 26 (0.241"). PLASTIC PIPE SHALL END 2' TO 4' INSIDE THE PROPERTY LINE WITH A RUBBER GASKETED PLASTIC CAP. HOUSE CONNECTIONS SHALL NOT REQUIRE BRACING, FOUNDATION LUMBER OR SHELLS. THE LOCATION OF ALL SEWER HOUSE CONNECTION SHALL BE IMPRINTED ON THE CURB WITH AN "S", NOT LESS THAN 3" HIGH AND 1/4" DEEP.

9. AT POINTS OF TIE-INS TO THE EXISTING SYSTEM, THE NEW PIPE MATERIAL SHOULD MATCH THE EXISTING. IF NOT, THE CONNECTION SHALL BE MADE WITH USE OF A COUPLING AND BUSHING ADAPTER (MISSION RUBBER CO., FERNCO OR EQUAL) CONFORMING TO ASTMC-425.

10. CONTRACTOR SHALL VERIFY ELEVATION OF EXISTING INVERTS.

11. THE SEWER INSTALLATION SHALL BE CHECKED AGAINST THE DRAINAGE PLAN. ANY MODIFICATION TO THE DRAINAGE PLAN AFTER THIS DATE SHALL VOID THE SEWER PLAN; HAVING PRIOR APPROVAL.

12. THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY SAME AND SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT THEM. THE BOARD IS NOT RESPONSIBLE FOR OTHER UNDERGROUND UTILITY SERVICES THAT ARE NOT SHOWN ON THE DRAWINGS AND THE CONTRACTOR SHALL NOT RECEIVE ADDED COMPENSATION FOR THE EXTRA WORK REQUIRED DUE TO THEIR OMISSION.

13. INFILTRATION RATE SHALL BE 0 (ZERO) GALLONS PER INCH PER MILE PER 24 HOURS; ANY DETECTABLE LEAKS SHALL BE REPAIRED BY THE CONTRACTOR. THE INFILTRATION TEST IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE WITNESSED BY THE BOARD'S REPRESENTATIVE.

14. BEFORE FINAL ACCEPTANCE THE CONTRACTOR SHALL LOCATE AND CERTIFY THE CORRECT LOCATION AND DEPTH OF ALL HOUSE CONNECTIONS.

15. FINAL ACCEPTANCE OF THE SYSTEM IS CONTINGENT UPON A 90 DAY MAINTENANCE PERIOD FOLLOWING A SATISFACTORY INSPECTION BY THE S&WB ENGINEER. PRIOR TO FINAL ACCEPTANCE THE BOARD WILL VERIFY THE DEFLECTION IN THE SOLID WALL PVC MAINS AS STATED HEREINBEFORE AND INSPECT A MINIMUM OF 10% OF THE SYSTEM WITH A REMOTE T.V. UNIT. THE PULL LINE SHALL BE PLACED IN THE LINES BY THE CONTRACTOR.

    THE CONTRACTOR WILL BE REQUIRED TO REPAIR IN AN APPROVED MANNER ALL DEFECTS DISCLOSED BY THIS INSPECTION BEFORE FINAL ACCEPTANCE. THE BOARD SHALL RESERVE THE RIGHT TO T.V. THE ENTIRE SEWAGE SYSTEM. THE COST OF ALL TESTS, INSPECTION AND PULLING OF MANDRELS SHALL BE INCLUDED IN THE COST OF THE SEWER MAIN.

    BEFORE FINAL INSPECTION OF THE SYSTEM, THE CONTRACTOR SHALL SUBMIT AN "AS BUILT" DRAWING TO THE BOARD SHOWING CHANGES IN LINE OR GRADE FROM THE ORIGINAL DRAWINGS, AND THE LOCATION OF ALL HOUSE CONNECTIONS AS PER SEWERAGE AND WATER BOARD REQUIREMENT. THIS "AS BUILT" DRAWING SHALL BE CERTIFIED CORRECT BY THE OWNER-DEVELOPER, LICENSED LOUISIANA SURVEYOR, AND CONTRACTOR, THAT IN THE FUTURE, ANY DEVIATION FROM THIS "AS-BUILT" DRAWING SHALL BE CORRECTED AT THE COST OF THE OWNER-DEVELOPER, AS REQUIRED BY SEWERAGE AND WATER BOARD.

CERTIFIED CORRECT

____________________ (OWNER-DEVELOPER)	____________ DATE
____________________ (SURVEYOR)	____________ DATE
____________________ (CONTRACTOR)	____________ DATE

16. THE FOLLOWING DIMENSIONS AND UNITS ARE REQUIRED FOR PVC SEWER PIPE (SDR-26) FOR SIZES 6" THROUGH 15"; ASTM F-679 CLASS T-1 FOR SIZE 18"-27".

NOM. SIZE (IN.)	O.D. AVG. (IN.)	MIN TOL. (IN.)	WALL. THK. (IN.) (MIN)
6	6.275	±0.011	0.241
8	8.400	±0.012	0.323
10	10.500	±0.015	0.404
12	12.500	±0.018	0.481
15	15.300	±0.023	0.588
18	18.701	±0.028	0.536
21	22.047	±0.033	0.632
24	24.803	±0.033	0.711
27	27.953	±0.042	0.801

17. ABANDONED SEWER MAINS MUST BE PLUGGED IN THE MANHOLE, CASTINGS REMOVED AND RETURNED TO THE S&WB CENTRAL YARD. MANHOLES MUST BE FILLED WITH SAND.

18. FORCE MAIN SEWER PIPE MATERIAL

A. PVC PIPE

1. PVC PIPE SHALL CONFORM TO AWWA C905 (LATEST REVISION), PRESSURE CLASS 200 (DR25) SPECIFICATIONS AND SHALL HAVE AN OUTSIDE DIAMETER EQUAL TO THAT OF CAST IRON PIPE.
2. JOINTS SHALL BE PUSH-ON, BELL AND SPIGOT RUBBER GASKET TYPE WITH LOCKED-ON RUBBER GASKETS.
3. FITTINGS FOR USE WITH PVC PIPE SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS INSTALLED WITH POLYETHYLENE ENCASEMENT AS SPECIFIED FOR DUCTILE IRON PIPE AND FITTINGS.

B. DUCTILE IRON PIPE AND FITTINGS

1. DUCTILE IRON PIPES SHALL CONFORM TO AWWA C150 (LATEST REVISION), THICKNESS CLASS 56 WITH AWWA C110 CLASS 350 FITTINGS. JOINTS SHALL BE PUSH-ON TYPE, BELL AND SPIGOT WITH RUBBER GASKETS MEETING AWWA C111 SPECIFICATIONS. MECHANICAL JOINTS SHALL MEET AWWA C111 SPECIFICATIONS.
2. FITTINGS SHALL BE DUCTILE IRON MEETING AWWA C110 (LATEST REVISION), CLASS 250 SPECIFICATIONS. FITTINGS SHALL BE MECHANICAL JOINTS.
3. DUCTILE IRON PIPE AND FITTINGS SHALL HAVE AN ASPHALTIC OUTSIDE COATING IN ACCORDANCE WITH AWWA C151 SPECIFICATIONS AND BE INSTALLED IN A POLYETHYLENE ENCASEMENT MEETING AWWA C105 (LATEST REVISION) SPECIFICATIONS.
4. DUCTILE IRON PIPE AND FITTINGS SHALL HAVE A FACTORY INSTALLED INTERNAL CERAMIC EPOXY LINING, PROTECTO 401, 40 MILS NOMINAL THICKNESS.

C. JOINT RESTRAINT DEVICES

1. IN AREAS WHERE RESTRAINED JOINTS ARE SHOWN OR SPECIFIED, FITTINGS SHALL BE RESTRAINED BY USE OF A MECHANICAL JOINT RESTRAINT GLAND FOR USE WITH C-905 PVC PIPE. RESTRAINT HARNESS TO BE SERIES NO. 2030 MANUFACTURED BY EBBA IRON SALES, INC., OR EQUAL.
2. IN AREAS WHERE RESTRAINED JOINTS ARE SHOWN OR SPECIFIED ON STRAIGHT PIPE, JOINTS SHALL BE RESTRAINED BY USE OF A BELL RESTRAINT HARNESS FOR C-905 PVC PIPE. , RESTRAINT HARNESS TO BE SERIES NO. 2830 MANUFACTURED BY EBBA IRON SALES, INC., OR EQUAL.
3. RESTRAINT DEVICES FOR PVC PIPE SHALL HAVE A WORKING PRESSURE EQUAL TO THE FULL RATE PRESSURE OF THE PVC PIPE, ON WHICH THEY ARE INSTALLED, WITH A MINIMUM OF 2:1 SAFETY FACTOR. RESTRAINERS SHALL MEET OR THE REQUIREMENTS OF UNI-B-13-92, "RECOMMENDED PERFORMANCE SPECIFICATIONS FOR JOINT RESTRAINING DEVICES USED WITH PVC PIPE."
4. IN AREAS WHERE RESTRAINED JOINTS ARE SHOWN OR SPECIFIED, FITTINGS SHALL BE RESTRAINED BY USE OF A MECHANICAL JOINT RESTRAINT GLAND FOR USE WITH CLASS 56 DUCTILE IRON PIPE. RESTRAINT GLAND TO BE SERIES NO. 110SD MANUFACTURED BY EBBA IRON SALES, INC., OR EQUAL.
5. IN AREAS WHERE RESTRAINED JOINTS ARE SHOWN OR SPECIFIED ON STRAIGHT PIPE, JOINTS SHALL BE RESTRAINED BY USE OF A BELL RESTRAINT HARNESS FOR CLASS 56 DUCTILE IRON PIPE. RESTRAINT HARNESS TO BE SERIES NO. 110SD MANUFACTURED BY EBBA IRON SALES, INC., OR EQUAL.
6. JOINT RESTRAINT DEVICES ON DUCTILE IRON PIPE SHALL HAVE A MINIMUM WORKING PRESSURE OF 250 PSI, WITH A 2:1 SAFETY FACTOR. RESTRAINTS SHALL MEET ANSI/AWWA C151/A21.51 AND ANSI/AWWA C150/A21.50.

D. TESTING

1. ALL NEW MAINS, VALVES, AND SERVICES SHALL BE INSTALLED PRIOR TO PRESSURE TESTING. THE SYSTEM SHALL BE PRESSURE TESTED BY THE CONTRACTOR IN THE PRESENCE OF THE S&WB INSPECTOR AND IN ACCORDANCE WITH PARAGRAPH F-15 OF THE GENERAL SPECIFICATIONS. THE TEST SHALL BE SCHEDULED BY THE S&WB INSPECTOR. ALL AIR SHALL BE BLED FROM THE SYSTEM PRIOR TO TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED AS A RESULT OF TEST FAILURES, INCLUDING REPAIRS TO DEFECTS.

2. THROUGHOUT THE TEST, THE PRESSURE WILL BE MAINTAINED AT 100 PSI. IF THE PRESSURE DROPS TO 95 PSI IT MUST BE INCREASED BACK TO 100 PSI BY ADDING ADDITIONAL WATER TO THE PIPE. EACH SUBSEQUENT "PUMP UP" MUST USE LESS WATER PER HOUR THAN PREVIOUS OR THE MAIN WILL NOT BE ACCEPTED. IF THE CONTRACTOR ALLOWS THE PRESSURE TO FALL BELOW 95 PSI AT ANY POINT, THE MAIN WILL NOT BE ACCEPTED. THE TEST SHALL BE PERFORMED FOR A MINIMUM OF 3 HOURS AND A MAXIMUM OF 24 HOURS. ALLOWABLE LEAKAGE SHALL NOT EXCEED 20 GALLONS OF WATER PER 24 HOURS, FOR EACH MILE OF PIPE PER INCH OF INSIDE DIAMETER FOR PIPES 12 IN. AND SMALLER. FOR PIPES LARGER THAN 12 IN., THE ALLOWABLE LEAKAGE SHALL BE 10 GALLONS OF WATER PER 24 HOURS, FOR EACH MILE OF PIPE, PER INSIDE INCH DIAMETER.

SEWER NOTES

I. GENERAL

1. IT IS TO BE UNDERSTOOD THAT ALL REFERENCES TO "THE SEWERAGE AND WATER BOARD (S&WB) ENGINEER" THROUGHOUT THIS DOCUMENT SHALL REFER TO THE GENERAL SUPERINTENDENT OF THE S&WB OR HIS APPOINTED REPRESENTATIVE, AND ALL REFERENCES TO "THE S&WB INSPECTOR" THROUGHOUT THIS DOCUMENT SHALL REFER TO THE INSPECTOR ASSIGNED TO THE PROJECT BY THE S&WB ENGINEER. THE S&WB INSPECTOR SHALL REPRESENT THE S&WB ENGINEER IN HIS/HER ABSENCE. IT IS ALSO TO BE UNDERSTOOD THAT ALL REFERENCES TO S&WB DRAWINGS AND SPECIFICATIONS REFER TO THE LATEST EDITION OR REVISION.

2. THE CONTRACTOR SHALL HAVE AN INDIVIDUAL WITH A WASTEWATER COLLECTION CLASS IV LICENSE, OBTAINED THROUGH THE LOUISIANA DEPARTMENT OF HEALTH AND HOSPITALS, ON SITE AT ALL TIMES DURING INSTALLATION OF THE SEWER LINES AND APPURTENANCES.

3. THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, MATERIALS, AND EQUIPMENT REQUIRED FOR THE INSTALLATION OF NEW SEWER MAINS, MANHOLES, HOUSE CONNECTIONS, ETC., REQUIRED BY THE PROJECT DRAWINGS AND SPECIFICATIONS.

4. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE GENERAL SPECIFICATIONS OF THE S&WB. ANY MODIFICATION FROM THE DESIGN DRAWINGS MUST BE APPROVED BY THE S&WB ENGINEER PRIOR TO CONSTRUCTION.

5. PRIOR TO THE INSTALLATION OF ANY S&WB FACILITIES, THE ENTIRE AREA WITHIN THE PUBLIC RIGHT-OF-WAY, INCLUDING THE ENTIRE WIDTH OF ANY SERVITUDES ADJACENT TO THE FRONT PROPERTY LINE, PLUS AN ADDITIONAL 3 FT. MUST BE FILLED TO THE FINISHED GRADE.

6. ALL ELEVATIONS SHOWN ON THE DRAWINGS REFER TO CAIRO DATUM IN WHICH 0.00 FT. NGVD IS EQUAL TO 20.43 FT. CAIRO DATUM.

7. IT IS TO BE UNDERSTOOD THAT WHEREVER SAND IS STIPULATED IN THE SPECIFICATIONS OR DRAWINGS, IT SHALL REFER TO PUMPED MISSISSIPPI RIVER SAND OR ANY NATURAL SAND DEPOSIT MEETING THE REQUIREMENTS OF AASHTO A-3 OR ASTM-SP.

8. THE CONTRACTOR SHALL NOTIFY THE GENERAL SUPERINTENDENT (625 ST. JOSEPH ST. N.O. LA 70165), WITH COPIES TO THE CHIEF OF ENGINEERING (8800 S. CLAIBORNE AVE N.O. LA 70118), AND THE CHIEF OF CONSTRUCTION ADMINISTRATION AND INSPECTION (8800 S. CLAIBORNE AVE N.O. LA 70118) OF THE S&WB IN WRITING NOT LESS THAN THREE NOR MORE THAN TEN DAYS IN ADVANCE OF STARTING THE PROJECT SO AS TO SCHEDULE THE INSPECTION OF ANY S&WB WORK. FAILURE TO DO SO PRIOR TO STARTING THIS WORK SHALL REQUIRE THE CONTRACTOR TO EXPOSE THE BEDDING ON ALL PIPE, OR ANY OTHER CONCEALED WORK PREVIOUSLY INSTALLED IN ORDER TO OBTAIN THE APPROVAL OF THE S&WB INSPECTOR. ANY WORK PERFORMED WITHOUT A S&WB INSPECTOR'S APPROVAL WILL NOT BE ACCEPTED BY THE S&WB NOR TIED INTO THE S&WB'S COLLECTION SYSTEM.

9. THE LOCATION OF EXISTING UTILITIES SHOWN ON THE DRAWINGS SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL EXISTING STRUCTURE INVERTS AND THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF WORK, AND SHALL BE RESPONSIBLE FOR ANY NEGLIGENCE ON HIS PART IN PROTECTING THEM. THE LOCATION OF SEWER AND WATER HOUSE CONNECTIONS CAN BE OBTAINED FROM THE S&WB.

10. ALL S&WB MAINTAINED SEWER WORK PERFORMED BY THE CONTRACTOR WILL BE SUBJECT TO THE APPROVAL OF THE S&WB INSPECTOR. THE CONTRACTOR SHALL PROVIDE THE S&WB INSPECTOR FULL ACCESS TO THE WORK THROUGHOUT CONSTRUCTION AND ABIDE BY ANY JUSTIFIABLE S&WB INSPECTOR'S REQUEST TO EXPOSE ANY AND ALL WORK INSTALLED BY THE CONTRACTOR.

11. BACKFILL MATERIAL FOR ALL UTILITIES SHALL BE SAND EITHER COMPACTED MECHANICALLY IN 6 IN. LIFTS OR FLOODED IN 3 FT. LIFTS. COMPACTION SHALL BE PERFORMED TO 95% MAXIMUM DRY DENSITY, NEAR OPTIMUM WATER CONTENT, AND SHALL MEET THE COMPACTION CHARACTERISTICS OF ASTM D-1557

12. SPECIFICATIONS FOR SEWER FORCE MAIN PIPE SHALL BE JOB SPECIFIC.

II. PIPE MATERIAL

1. MATERIAL FOR SEWER MAINS SHALL BE SOLID WALL PVC PIPE, MANUFACTURED IN ACCORDANCE WITH ASTM D-3034 SPECIFICATIONS AND TO A SDR (STRENGTH DIMENSION RATIO) OF 26 WITH ELASTOMERIC GASKETS. THE ELASTOMERIC GASKETS AND RETAINER RINGS SHALL BE INSTALLED BY THE MANUFACTURER IN ACCORDANCE WITH ASTM D-3212 AND F-477.

2. THE FITTINGS FOR SOLID WALL PVC PIPE SHALL BE THE SAME INSIDE DIAMETER AS THE SOLID WALL PVC WITH AN SDR OF 35.

3. PVC SEWER MAINS, SIZES 18 IN. THROUGH 27 IN. SHALL BE SOLID WALL PVC PIPE CONFORMING TO ASTM F-679.

4. THE MAXIMUM ALLOWABLE COMPRESSION FOR INSTALLED PVC SEWER PIPE IS 7.5 PERCENT (7.5%) OF ITS ORIGINAL VERTICAL INSIDE DIAMETER. PIPE EXCEEDING THIS ALLOWABLE COMPRESSION SHALL BE REMOVED AND REPLACED WITH NEW PIPE, REINSTALLED AT THE CONTRACTOR'S EXPENSE.

5. AT POINTS OF TIE-INS TO THE EXISTING SYSTEM, THE NEW PIPE MATERIAL SHOULD MATCH THE EXISTING. IF THE NEW MATERIAL DOES NOT MATCH THE EXISTING MATERIAL, THE CONNECTION SHALL BE MADE WITH THE USE OF A COUPLING AND BUSHING ADAPTER INTENDED FOR THAT PURPOSE, ARC (MISSION RUBBER CO.), FERNCO, OR EQUAL, CONFORMING TO ASTM C-425.

6. DUCTILE IRON PIPE SHALL BE USED WHERE SPECIFIED ON THE CONSTRUCTION DRAWINGS AND SHALL CONFORM TO SECTION II-B, "DUCTILE IRON" OF THE S&WB 7260 WATER NOTES EXCEPT THAT THE INTERIOR LINING SHALL BE CERAMIC EPOXY, PROTECTO 401, OR APPROVED EQUAL, AND MUST BE FACTORY INSTALLED WITH 40 MILS NOMINAL THICKNESS.

III. SEWER MAIN INSTALLATION

1. THE SEWER MAIN MUST BE LAID IN A SEPARATE TRENCH FROM ALL OTHER UTILITIES. THE MINIMUM ALLOWABLE HORIZONTAL DISTANCE BETWEEN THE SEWER MAIN AND THE WATER MAIN SHALL BE 6 FT., AND A MINIMUM VERTICAL SEPARATION OF 18 IN. AS STIPULATED IN LOUISIANA ADMINISTRATIVE CODE TITLE FIFTY-ONE (51) PUBLIC HEALTH-SANITARY CODE PART XII WATER SUPPLIES. THE MINIMUM ALLOWABLE HORIZONTAL DISTANCE BETWEEN THE SEWER MAIN AND OTHER UTILITIES SHALL BE 3 FT., AND A MINIMUM VERTICAL CLEARANCE OF 12 IN. ABOVE OR 12 IN. BELOW OTHER UTILITIES. FOR PAYMENT PURPOSES, DEPTHS OF SEWER MAINS SHALL BE DETERMINED BY THE AVERAGE MEASUREMENTS FROM INVERTS TO THE TOP OF CASTINGS AT FINISHED GRADE OF CONNECTING MANHOLES. ALL DIMENSIONS BETWEEN UTILITIES SHALL BE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.

2. SEWER MAINS AND INTERCONNECTING MANHOLES SHALL BE INSTALLED AT ELEVATIONS INDICATED ON THE PLANS UNLESS CHANGED BY THE S&WB ENGINEER. ALL MAINS MUST BE LAID CONTINUOUSLY FROM MANHOLE TO MANHOLE, LAID FROM THE LOW END OF THE SYSTEM WITH THE BELL FACING UPSTREAM, AND MUST BE OF THE SAME SIZE PIPE DIAMETER. THE MINIMUM DEPTH OF A SEWER MAIN SHALL BE 5.5 FT. FROM SURFACE TO INVERT.

3. INSTALLATION OF THE SOLID WALL PVC PIPE SHALL CONFORM TO SECTION D, "THE CONSTRUCTION OF SEWERS," OF THE GENERAL SPECIFICATIONS OF THE S&WB. THE TRENCH BOTTOM SHALL BE SMOOTH AND FREE FROM ROCKS, ROOTS, ETC. AFTER THE SHEETING AND/OR FOUNDATION LUMBER IS PLACED, THE PIPE SHALL BE LAID ON A SMOOTH BED OF APPROVED BEDDING MATERIAL. BEDDING AND FOUNDATIONS FOR MAINS AND STANDARD SHEETING AND BRACING SHALL COMPLY WITH S&WB DWG. NO. 4697-E5A. THE BEDDING MATERIAL SHALL BE EXTENDED UNDER, AROUND, AND OVER THE TOP OF THE PIPE AND COMPACTED IN LAYERS NOT GREATER THAN 6 IN. BY A MECHANICAL VIBRATING COMPACTOR APPROVED BY THE S&WB ENGINEER UNTIL A MINIMUM OF 95% STANDARD PROCTOR DENSITY IS ATTAINED AT OR NEAR OPTIMUM MOISTURE CONTENT FOR THE FULL WIDTH OF THE TRENCH. THE BEDDING MATERIAL SHALL BE CLASS I ANGULAR MATERIAL (1/4 IN. TO 1-1/2 IN.), ASTM D2321 OR ASTM C33. THE S&WB ENGINEER RESERVES THE RIGHT TO APPROVE THE TYPE OF BEDDING MATERIAL TO BE USED.

4. FILTER FABRIC SHALL BE INSTALLED AROUND THE BEDDING AND UNDER THE BACKFILL IN ALL SEWER INSTALLATIONS AS SHOWN IN S&WB DWG. NO 4697-E5A, AND CONFORM BY WEIGHT TO ASTM D1910. THE FILTER FABRIC SHALL BE DOTD CLASS C OR D, NON-WOVEN PERVIOUS SHEETS OF PLASTIC YARN MIRAFI 170N, OR AN EQUAL APPROVED BY THE S&WB ENGINEER, CONSTRUCTED SO THE YARNS WILL RETAIN THEIR RELATIVE POSITION WITH RESPECT TO EACH OTHER. EDGES OF THE FABRIC SHALL BE FINISHED TO PREVENT THE OUTER YARN FROM PULLING AWAY FROM THE FABRIC. THE FABRIC SHALL BE INSTALLED AS FOLLOWS:

A. AFTER THE TRENCH IS EXCAVATED, THE FOUNDATION LUMBER SHALL BE PLACED IN THE BOTTOM OF THE TRENCH AS SHOWN ON THE STANDARD DRAWINGS. THE FILTER FABRIC SHALL BE CUT TO THE NEEDED WIDTH, INCLUDING ALLOWANCES FOR "LOOSE" PLACEMENT IN THE TRENCH, WITH A DOUBLE OVERLAP ON TOP OF THE BEDDING MATERIAL AFTER PLACEMENT. THE FABRIC SHALL BE LAID OVER THE FOUNDATION LUMBER IN THE TRENCH ALONG THE PIPES ALIGNMENT WITH AN 18 IN. MINIMUM OVERLAP AT THE ENDS OF SUBSEQUENT LENGTHS. CARE SHOULD BE TAKEN TO PLACE THE FABRIC TIGHTLY AGAINST THE SOIL SO THAT NO VOIDS OCCUR OUTSIDE THE FABRIC. WRINKLES OR FOLDS SHOULD BE AVOIDED. THE SIDES OF THE FABRIC WHICH WILL BE USED AS A DOUBLE-TOP OVERLAP SHOULD TEMPORARILY BE PINNED TO THE SIDES OF THE TRENCH.

B. AFTER INSTALLING THE FABRIC, AN INITIAL 6 IN. LAYER OF BEDDING MATERIAL SHALL BE PLACED AND COMPACTED TO THE PROPER GRADE BEFORE PLACING THE SEWER PIPE. THE REMAINDER OF THE BEDDING MATERIAL SHALL THEN BE PLACED AROUND AND ABOVE THE PIPE AND COMPACTED. COMPACTION IS REQUIRED TO SEAT THE FABRIC AND BEDDING MATERIAL AGAINST THE TRENCH WALL AND TO REDUCE SETTLEMENT.

C. AFTER COMPACTION, THE TWO EDGES OF THE FILTER FABRIC SHALL BE UNFASTENED AND OVERLAPPED FOR THE FULL WIDTH OF THE TRENCH ON TOP OF THE BEDDING MATERIAL. THE BACKFILL MATERIAL SHALL THEN BE PLACED ON TOP OF THE FILTER FABRIC AND COMPACTED.

IV. MANHOLES

1. MANHOLES SHALL CONFORM TO SECTION D OF THE GENERAL SPECIFICATIONS AND S&WB DWG. NOS. D-870. SHORT SECTIONS OF PIPE WITH BELL FITTINGS AND WATER STOPS, AS RECOMMENDED BY THE MANUFACTURER AND AS SHOWN ON S&WB DWG. NO. 8178-SD, SHALL BE USED AS CONNECTORS FOR BRICK MANHOLES. AS AN ALTERNATIVE, A SAND IMPREGNATED PVC STUB, APPROVED BY THE S&WB ENGINEER, MAY BE USED AND GROUTED IN PLACE USING A TYPE THREE HIGH EARLY STRENGTH CEMENT, OR QUICK SETTING EMBECO, OR SIMILAR MATERIAL APPROVED BY THE S&WB ENGINEER. KOR-N-SEAL BOOTS, OR APPROVED EQUAL, AS SHOWN ON S&WB DWG. NO. 8178-SD, SHALL BE USED FOR PRECAST MANHOLE PIPE CONNECTIONS.

2. MANHOLE STEPS SHALL CONFORM TO S&WB DWG. NO. D-1359.

3. ABANDONED SEWER MAINS MUST BE PLUGGED IN THE MANHOLE. WALLS OF ABANDONED MANHOLES SHALL BE REMOVED TO A MINIMUM OF 2 FT. BELOW FINISHED GRADE AND THE ABANDONED MANHOLES MUST BE FILLED WITH SAND AND FLOODED. CASTINGS AND COVERS ARE TO BE REMOVED AND RETURNED TO THE S&WB CENTRAL YARD, 2900 PEOPLES AVE N.O. LA 70122.

4. ALL MANHOLE FOUNDATION SLABS SHALL BE PLACED ON A 6 IN. LAYER OF CRUSHED STONE OR APPROVED EQUAL BEDDING MATERIAL IN ACCORDANCE WITH S&WB DWG. NO. D-870.

V. HOUSE CONNECTIONS

1. HOUSE CONNECTIONS SHALL BE INSTALLED USING 6 IN. SOLID WALL SDR 26 PVC PIPE EXTENDED TO THE PROPERTY LINE AS SHOWN ON S&WB DWG. NO. 6312-E5. THE USE OF SADDLES WILL NOT BE PERMITTED; ALL SUCH CONNECTIONS SHALL BE MADE WITH THE USE OF APPROVED FITTINGS. ALL PIPE AND FITTINGS SHALL BE THE SAME MATERIAL AS THE SEWER MAIN UNLESS OTHERWISE APPROVED BY THE S&WB ENGINEER. HOUSE CONNECTIONS SHALL HAVE A MINIMUM OF 3.5 FT. AND A MAXIMUM OF 4.5 FT. OF COVER, MEASURED FROM THE GUTTER LINE AND FROM THE GROUND SURFACE AT THE PROPERTY LINE. THE HOUSE CONNECTION SHALL END AT THE PROPERTY LINE OR EXTEND THROUGH ANY PROPOSED SERVITUDES ADJACENT TO THE PROPERTY LINE WITH A RUBBER GASKETED PLASTIC CAP. HOUSE CONNECTIONS SHALL NOT REQUIRE BRACING, FOUNDATION LUMBER, OR BEDDING. THE LOCATION OF ALL SEWER HOUSE CONNECTIONS SHALL BE IMPRINTED ON THE CURB WITH AN "S", 3 IN. HIGH AND ¼ IN. DEEP AS SHOWN ON S&WB DWG. NO. 6312-E5.

VI. TESTING AND INSPECTION

1. ALL INSTALLATION OF SEWER MAINS AND RELATED APPURTENANCES WILL BE PERFORMED UNDER THE INSPECTION OF, AND TO THE SATISFACTION OF, THE S&WB INSPECTOR THROUGHOUT THE COURSE OF THE WORK.

2. INFILTRATION RATE FOR NEWLY INSTALLED GRAVITY MAINS SHALL BE ZERO GALLONS. INFILTRATION TEST RATES FOR FORCE MAINS SHALL NOT EXCEED A RATE OF 250 GALLONS PER IN. OF DIAMETER PER MILE, PER 24 HOURS, SHALL BE CONDUCTED BY THE CONTRACTOR AND OBSERVED BY THE S&WB. THIS TEST SHALL BE PERFORMED ONLY AFTER THE BACKFILLED TRENCH HAS REMAINED FLOODED FOR AT LEAST 12 HOURS PRIOR TO THE TEST. THE TRENCH SHALL REMAIN FLOODED DURING THE TEST. THE CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY FOR THIS TEST. IF AN INFILTRATION TEST IS NOT PERFORMED PRIOR TO PAVING, AN EXFILTRATION TEST MAY BE MADE AS DIRECTED BY THE S&WB ENGINEER. ANY DETECTABLE LEAK SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE INFILTRATION TEST IS TO BE PERFORMED BY THE CONTRACTOR AND SHALL BE WITNESSED BY THE S&WB INSPECTOR.

3. AT THE COMPLETION OF BACKFILLING, AND PRIOR TO FINAL ACCEPTANCE OF THE SEWER, 100% OF THE SEWER MAIN MUST BE MANDRELED. THIS MANDREL WORK SHALL BE WITNESSED BY THE S&WB INSPECTOR AND PERFORMED BY THE CONTRACTOR AT NO DIRECT PAY. THE S&WB WILL PROVIDE THE MANDRELS FOR ALL TESTS AND THE CONTRACTOR SHALL PLACE THE PULL LINES IN THE MAINS. THE CONTRACTOR WILL HAVE THE OPTION OF PASSING THE MANDRELS AT ANY TIME AFTER FINAL BACKFILL OF THE TRENCHES BUT PRIOR TO FINAL ACCEPTANCE. IT IS REQUIRED THAT A S&WB REPRESENTATIVE AND THE CONTRACTOR WITNESS THE ACTUAL MANDRELING TEST(S).

4. THE SEWER LINE WILL BE CLEANED AND VIDEOED PRIOR TO THE INSTALLATION OF THE WEARING COURSE. IT IS REQUIRED THAT AN S&WB REPRESENTATIVE AND THE CONTRACTOR PHYSICALLY EYE-WITNESS THE ACTUAL CLEANING AND TV/VIDEO TEST(S).

5. THE CONTRACTOR WILL BE REQUIRED TO REPAIR, AT HIS OWN EXPENSE AND IN AN APPROVED MANNER, ALL DEFECTS IN WORKMANSHIP OR MATERIAL DISCLOSED BY THESE INSPECTIONS PRIOR TO OBTAINING FINAL ACCEPTANCE. THE CONTRACTOR SHALL ALSO BEAR ALL COST ASSOCIATED WITH THE RE-TESTING, INCLUDING ANY COST INCURRED BY THE S&WB.

VII. FINAL ACCEPTANCE

1. BEFORE FINAL INSPECTION OF THE SYSTEM, THE CONTRACTOR SHALL SUBMIT AN "AS-BUILT" DRAWING TO THE BOARD SHOWING ANY CHANGES IN LINE OR GRADE FROM THE ORIGINAL DRAWINGS, AS WELL AS SHOWING THE LOCATION OF ALL HOUSE CONNECTION, IN ACCORDANCE WITH S&WB REQUIREMENTS. IF WILL THE CONTRACTOR'S RESPONSIBILITY TO CERTIFY THAT THE "AS-BUILT" DRAWINGS ARE CORRECT. ANY INACCURACY AS DETERMINED BY THE S&WB IN THE "AS-BUILT" DRAWINGS SHALL BE CORRECTED AT THE COST OF THE CONTRACTOR.

2. THE CONTRACTOR MUST CONTACT THE S&WB TO SET A DATE FOR FINAL INSPECTION. IN THE EVENT THE CONTRACTOR CALLS FOR AN INSPECTION AND THE WORK IS NOT ADEQUATELY COMPLETE, A NEW INSPECTION DATE WILL THEN BE SET AT THE DISCRETION OF THE S&WB INSPECTOR.

3. FINAL ACCEPTANCE OF THE SYSTEM WILL BE SUBJECT TO A 1-YEAR MAINTENANCE PERIOD FOLLOWING FINAL ACCEPTANCE OF THE PROJECT BY THE S&WB.

John W. Holtgreve, Jr.
REG. No. 16383
6/5/13

CIVIL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD
OF NEW ORLEANS

CONTRACT 3667
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

SEWER NOTES

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. TH/BD
TRC. --
CK. DS/CW
AP. JH
SCALE: NONE
DATE: JANURARY 2012

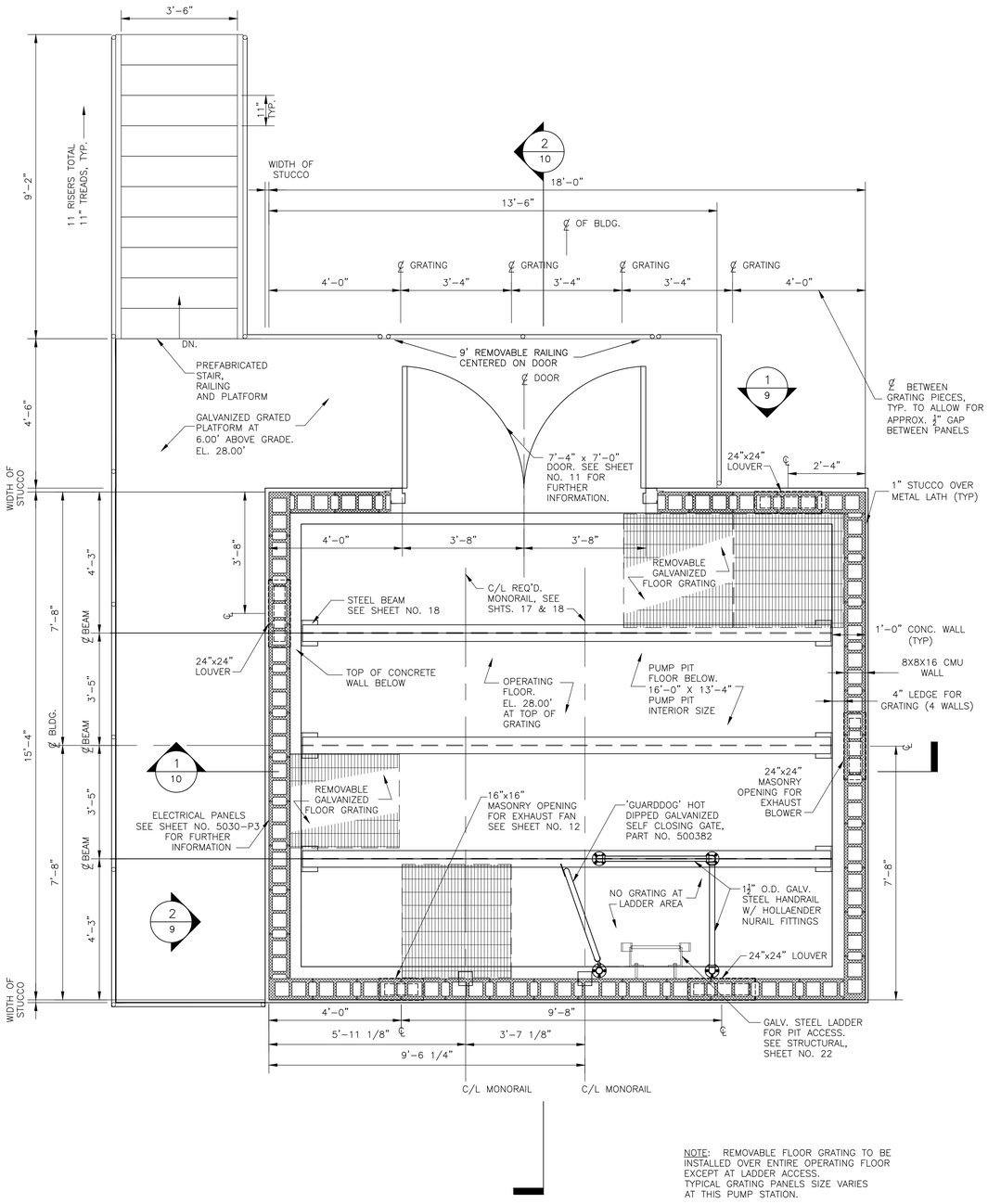
GENERAL SUPERINTENDENT

DWG. No. 12039-W-63

SET NO.

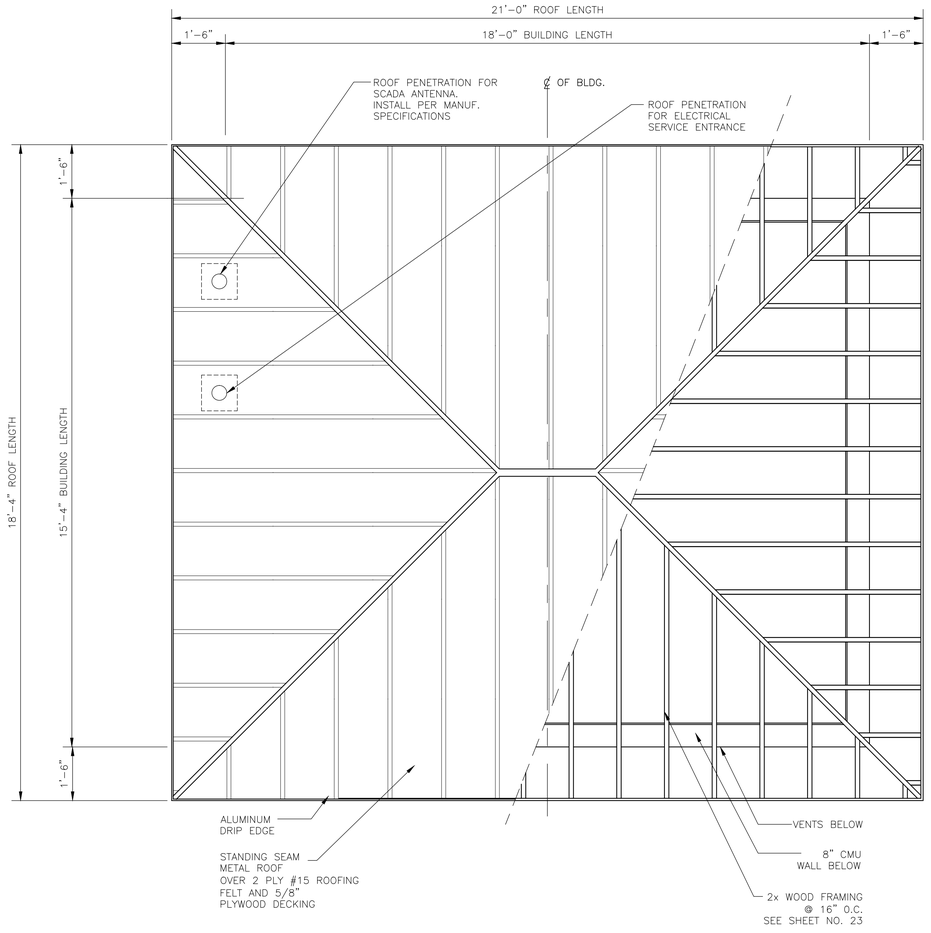
SHEET NO. 7

PRINTED May 31, 2013 - 9:05am FILENAME - J:\6005.1-GOSHEP-2013\Contract 3668 - Victoria SPS\SHT 7_VIC_Sew Dr Wat Notes.dwg



NOTE: REMOVABLE FLOOR GRATING TO BE INSTALLED OVER ENTIRE OPERATING FLOOR EXCEPT AT LADDER ACCESS. TYPICAL GRATING PANELS SIZE VARIES AT THIS PUMP STATION.

1 OPERATING FLOOR / ARCHITECTURAL FRAMING PLAN
1/2" = 1'-0"



2 COMBINED ROOF AND FRAMING PLAN
1/2" = 1'-0"

JOSEPH MICHAEL CROWLEY REG. NO. 7553 STATE OF LOUISIANA REGISTERED ARCHITECT
9/24/2013

ARCHITECTURAL

Perez.

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

FLOOR FRAMING AND ROOF PLANS

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
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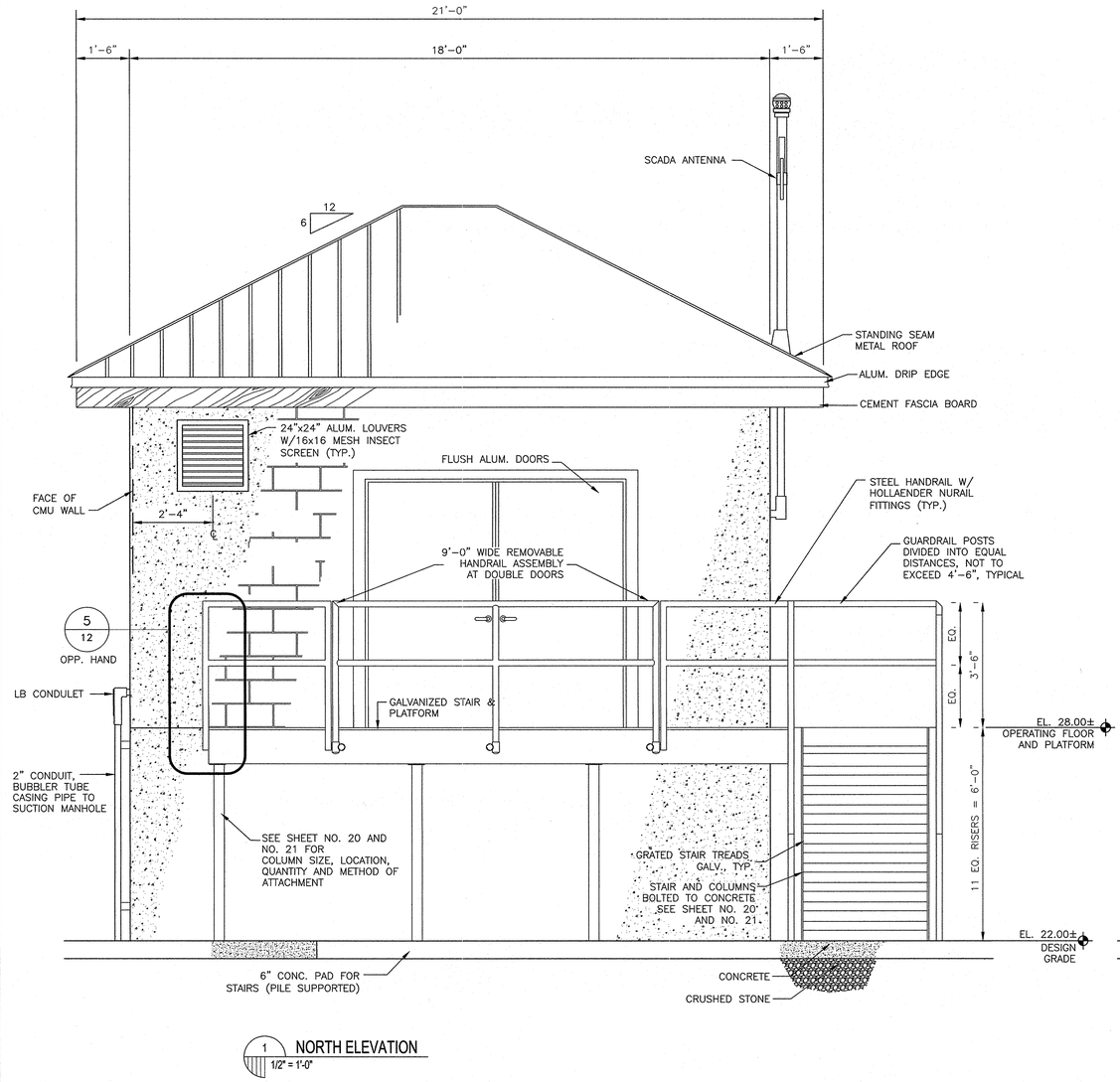
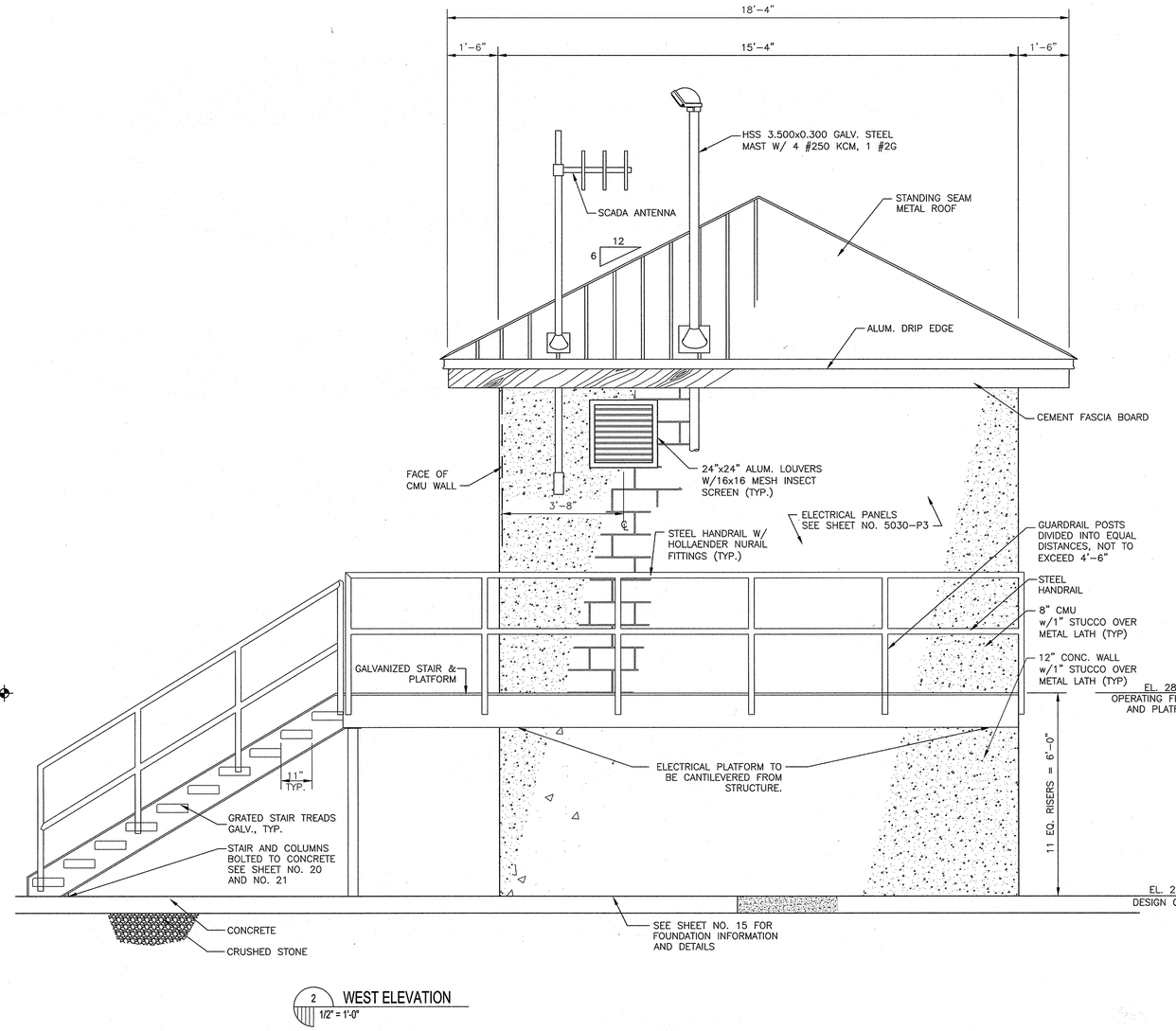
Metairie, LA 70002
(504) 836-2155

DR. JW	
TRC. ----	GENERAL SUPERINTENDENT
CK. DW	
AP. DW	DWG. No. 12039-W-63
SCALE: AS NOTED	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 8



1 NORTH ELEVATION
1/2" = 1'-0"



2 WEST ELEVATION
1/2" = 1'-0"

ARCHITECTURAL

Perez.

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

BUILDING ELEVATIONS

DANIEL C. TAYLOR REG. NO. 5309 STATE OF LOUISIANA LICENSED ARCHITECT 6/5/13

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
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DR. JW	
TRC. ----	GENERAL SUPERINTENDENT
CK. DW	
AP. DW	DWG. No. 12039-W-63
SCALE: AS NOTED	
DATE: MARCH 2013	SET NO. / SHEET NO. 9

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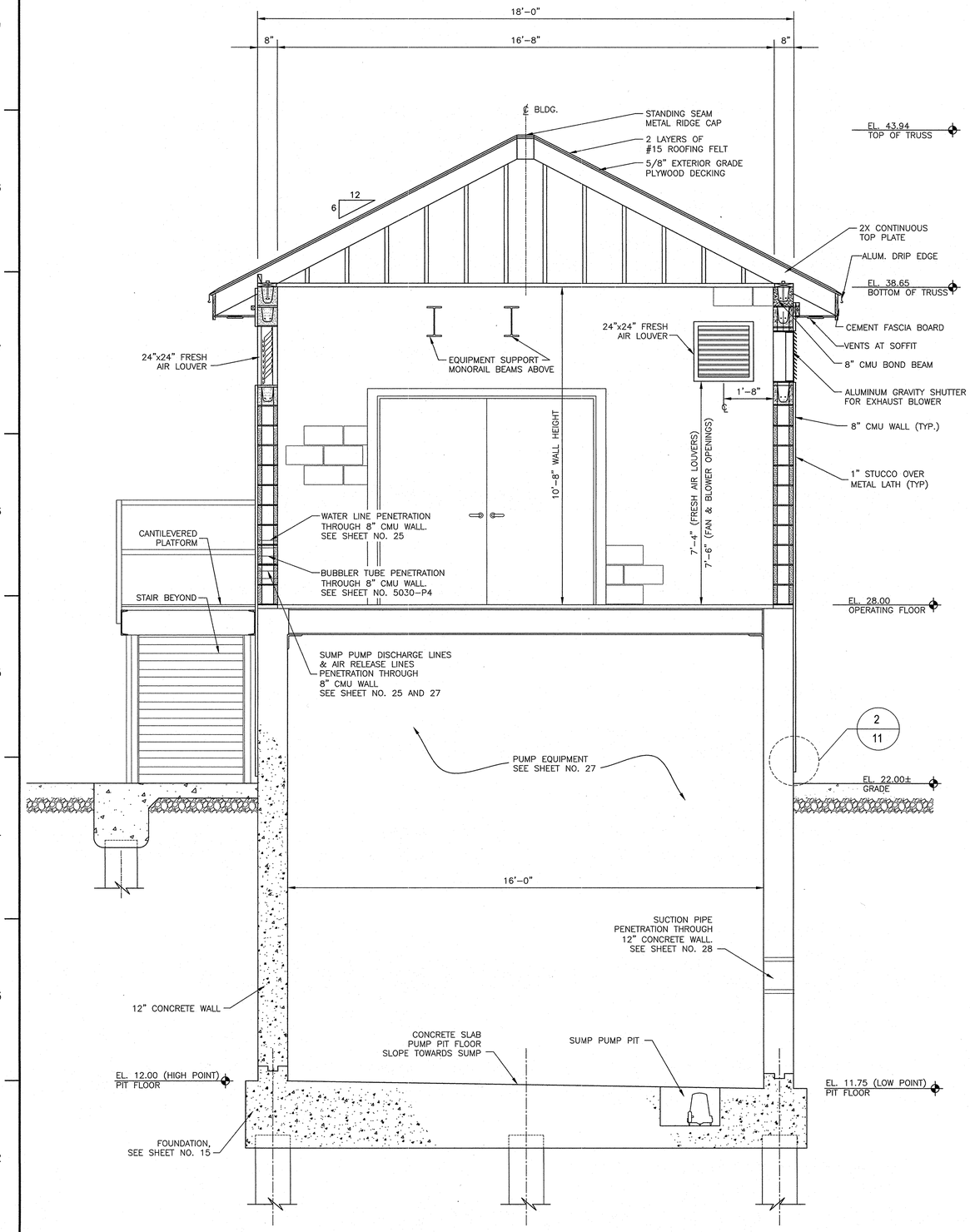
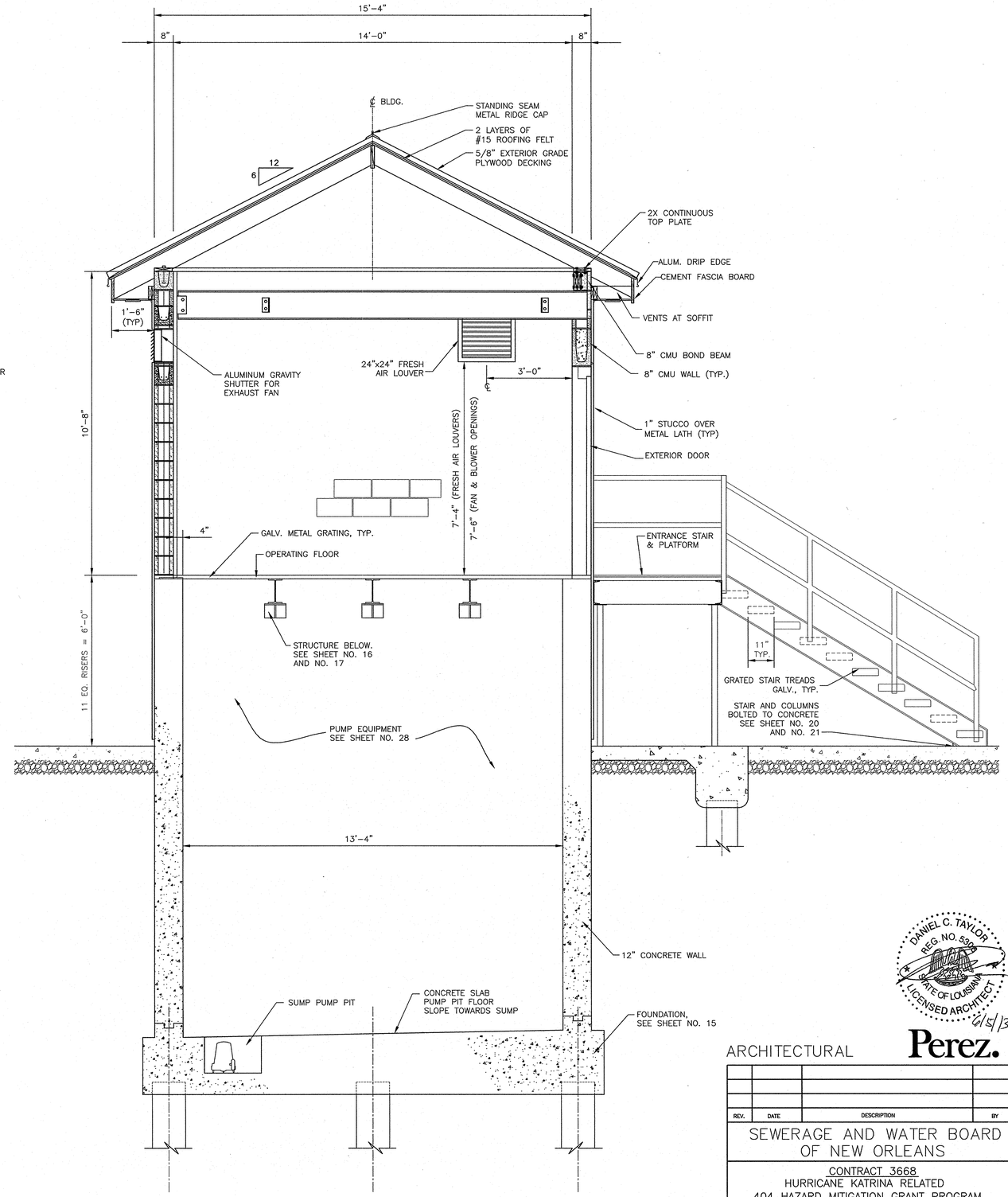


1 LONGITUDINAL SECTION OF BUILDING
1/2" = 1'-0"



2 CROSS SECTION OF BUILDING
1/2" = 1'-0"

DANIEL C. TAYLOR REG. NO. 5329 STATE OF LOUISIANA LICENSED ARCHITECT 6/5/13

ARCHITECTURAL

Perez.

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

BUILDING SECTIONS

DESIGN ENGINEERING INC.
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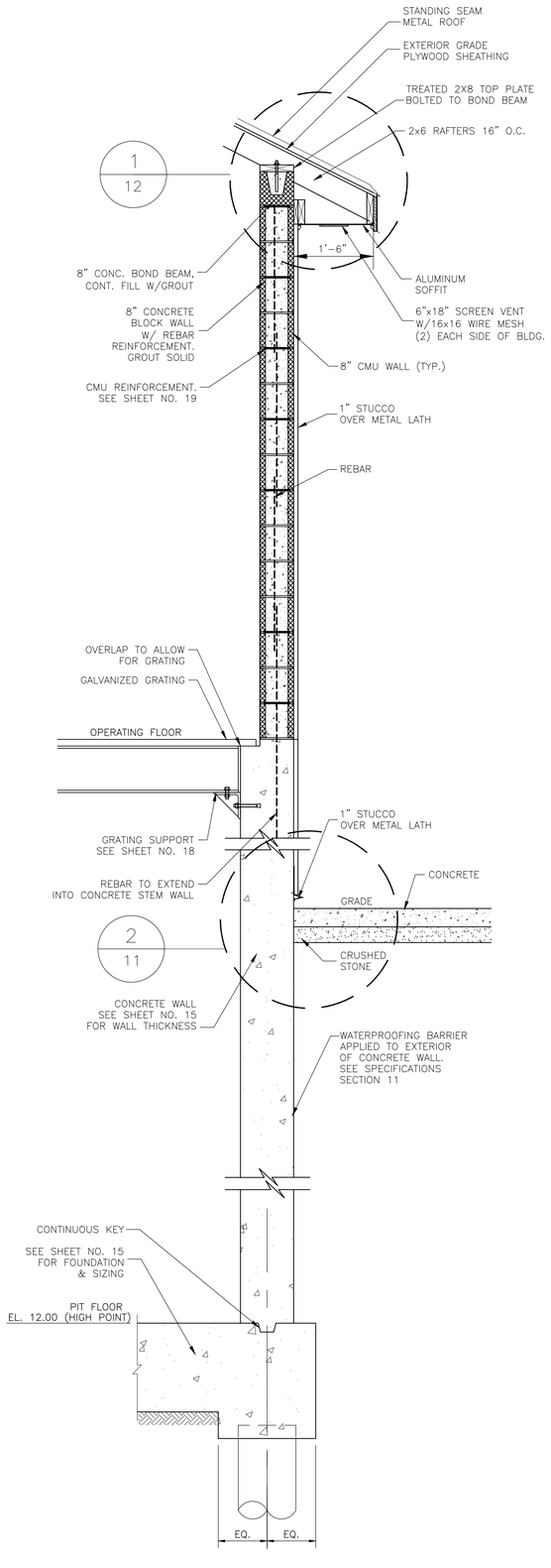
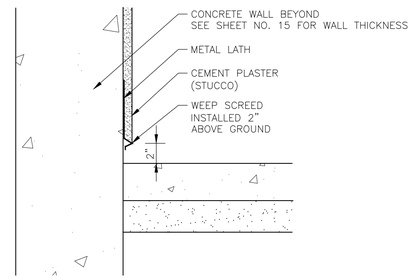
Metairie, LA 70002
(504) 836-2155

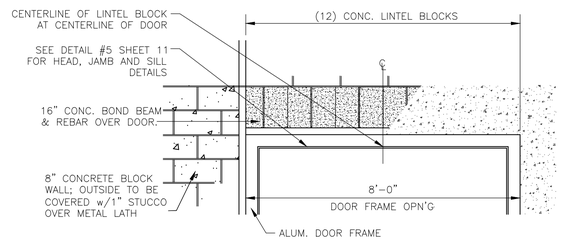
DR. JW	
TRC. -----	GENERAL SUPERINTENDENT
CK. DW	
AP. DW	DWG. No. 12039-W-63
SCALE: AS NOTED	
DATE: MARCH 2013	SET NO. SHEET NO. 10



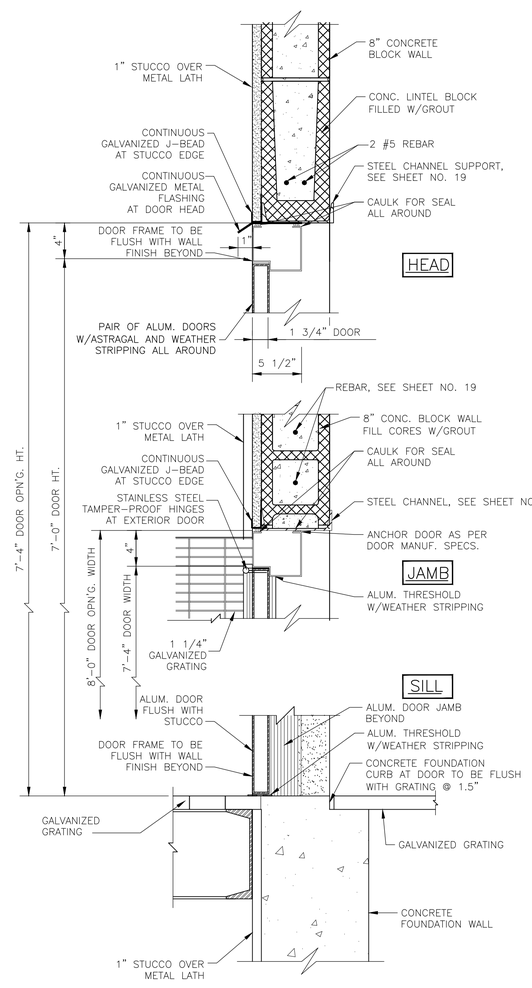
1 TYPICAL ROOF AND WALL DETAIL
1/4" = 1'



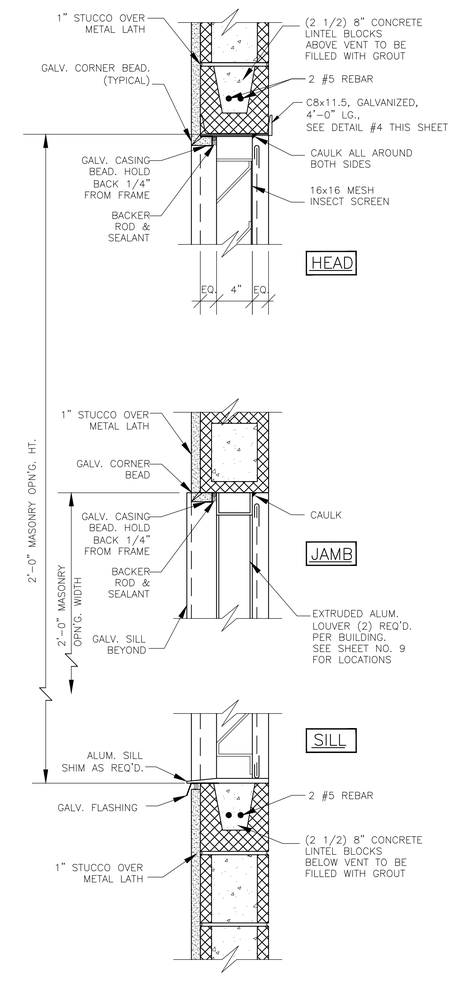
2 STUCCO BASE DETAIL
1 1/2" = 1'



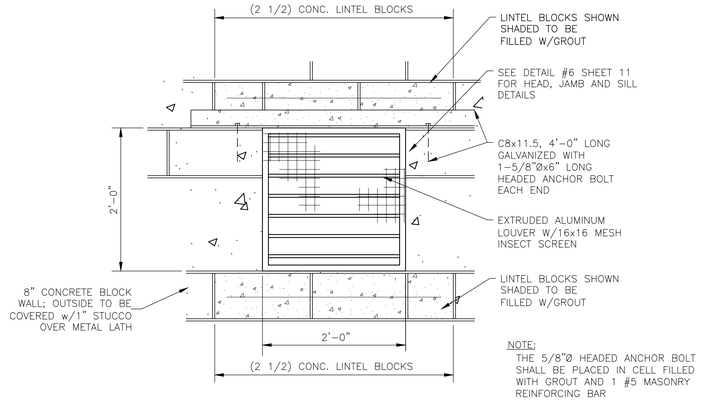
3 DOOR FRAME AND LINTEL DETAIL
1/2" = 1'



5 TYPICAL DOOR FRAME DETAIL
1 1/2" = 1'

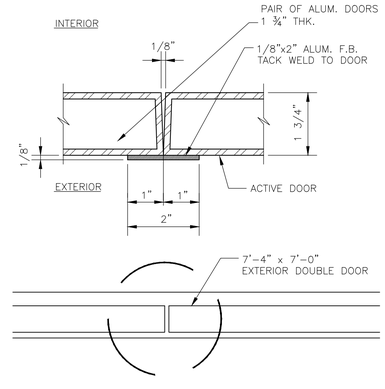


6 LOUVER DETAIL
1 1/2" = 1'



NOTE:
THE 5/8"Ø HEADED ANCHOR BOLT SHALL BE PLACED IN CELL FILLED WITH GROUT AND 1 #5 MASONRY REINFORCING BAR

4 ENLARGED LOUVER ELEVATION
1" = 1'



7 ASTRAGAL DETAIL
6" = 1'

JOSEPH MICHAEL CROWLEY REG. NO. 7559 STATE OF LOUISIANA REGISTERED ARCHITECT
9/24/2013

ARCHITECTURAL

Perez.

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

ARCHITECTURAL DETAILS

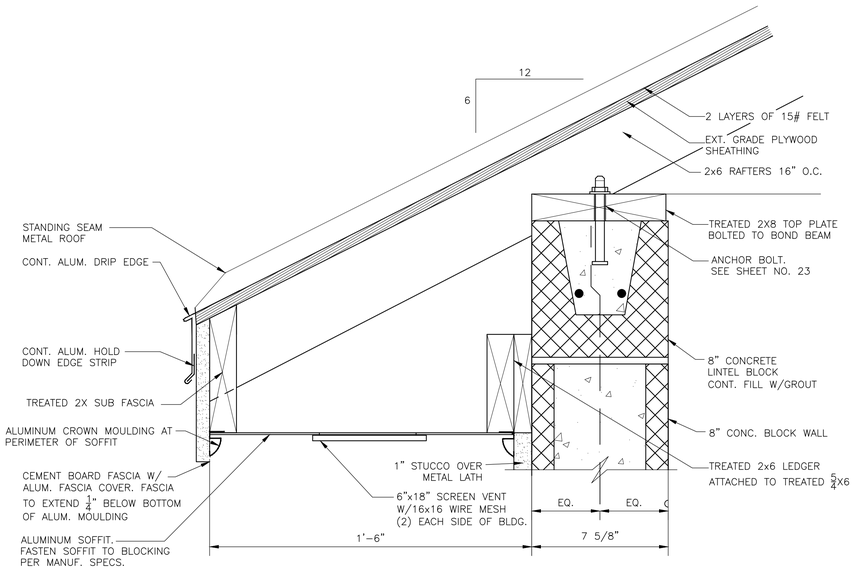
DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. JW
TRC. – – – –
CK. DW
AP. DW
SCALE: AS NOTED
DATE: SEPTEMBER 2013

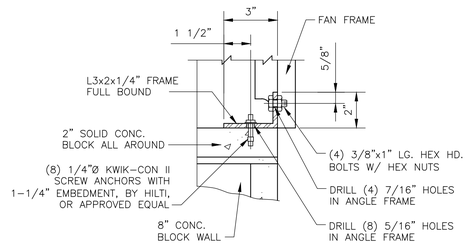
GENERAL SUPERINTENDENT

DWG. No. 12039-W-63

SET NO.
SHEET NO. 11

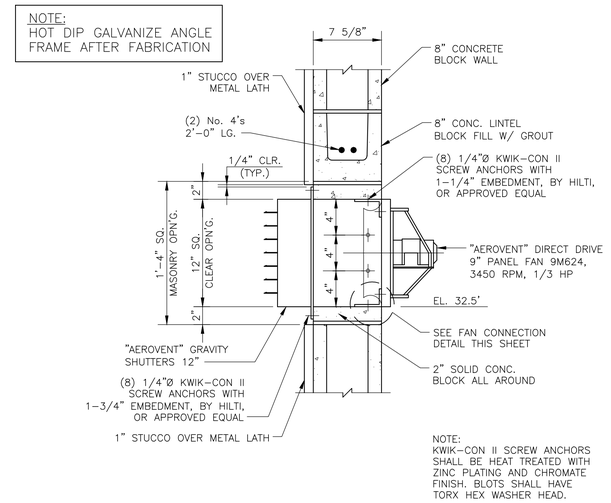


1 STANDING SEAM METAL ROOF SOFFIT DETAIL
3" = 1'



2 FAN CONNECTION DETAIL
3"=1'

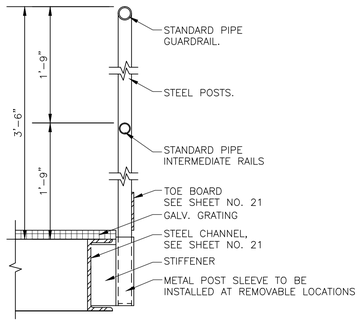
NOTE:
HOT DIP GALVANIZE ANGLE FRAME AFTER FABRICATION



NOTE:
KWIK-CON II SCREW ANCHORS SHALL BE HEAT TREATED WITH ZINC PLATING AND CHROMATE FINISH. BLOTS SHALL HAVE TORX HEX WASHER HEAD.

3 EXHAUST FAN AND SHUTTER DETAIL
1 1/2" = 1'

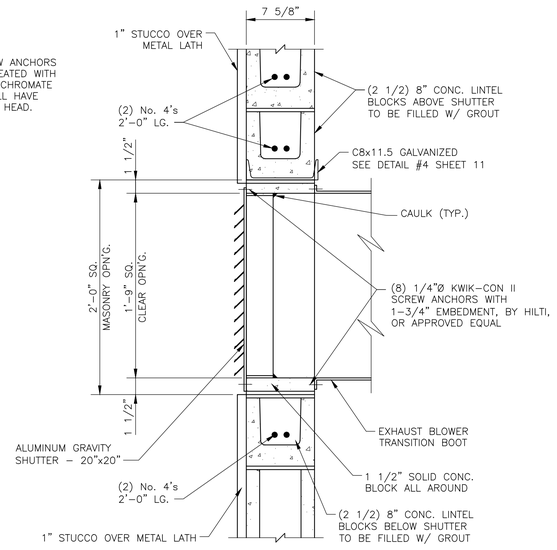
4 NOT USED



NOTE: SEE STRUCTURAL DETAILS, SHEET 21, FOR MORE INFORMATION

5 TYPICAL GUARDRAIL DETAIL
1 1/2" = 1'

NOTE:
KWIK-CON II SCREW ANCHORS SHALL BE HEAT TREATED WITH ZINC PLATING AND CHROMATE FINISH. BLOTS SHALL HAVE TORX HEX WASHER HEAD.



6 EXHAUST BLOWER AND SHUTTER DETAIL
1 1/2" = 1'

JOSEPH MICHAEL CROWLEY
REG. NO. 7553
STATE OF LOUISIANA
REGISTERED ARCHITECT
5/24/2013

ARCHITECTURAL

Perez.

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

ARCHITECTURAL DETAILS

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
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Metairie, LA 70002
(504) 836-2155

DR. JW	
TRC. ----	GENERAL SUPERINTENDENT
CK. DW	
AP. DW	DWG. No. 12039-W-63
SCALE: AS NOTED	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 12

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

SEWERAGE & WATER BOARD OF NEW ORLEANS
WASTEWATER REHABILITATION PROGRAM
DESIGN PACKAGE NO. 4
NEW ORLEANS, LOUISIANA

(Sheet 1 of 2)

Ground Elev.: **Datum:** **Gr. Water Depth:** See Text **Job No.:** 20701 **Date Drilled:** 8/18 & 19 /09 **Boring:** 3 Refer to "Legends & Notes"

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density Dry	Density Wet	Shear Tests Type	Shear Tests ø	Shear Tests C	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI		Other Tests
0					Sandy clay w/roots	CL	1	0-0.5											
	3.00				Very stiff dark brown silty clay w/silt pockets & shells (Fill)	CL	2	2-3	20										
						CH	3	3-4	33										
					Medium stiff brown & gray clay w/silt pockets & shells (Fill)		4	4-5	30										
							5	5-6	41										
	1.50				Stiff gray clay w/silt lenses & shell fragments	CH	6	8-9	29	97	125	UC	--	1208	40	23	17		
10					Medium stiff brown & gray clay w/silt lenses	CH	7	11-12	37	86	118	UC	--	600	55	22	33		
					Medium stiff to stiff gray silty clay w/silt lenses & sandy silt layers	CL	8	14-15	31	94	123	UC	--	524	38	21	17		
	0.50						9	18-19	34	89	119	UC	--	1208					
20					Medium compact dark gray clayey silt	ML	10	23-24	29	97	125	UC	--	787					
					Very soft dark gray silty clay w/clay layers	CL	11	28-29	39	84	117	UC	--	140					
30					Soft to medium stiff dark gray clay w/sand & silt layers	CH	12	33-34	54	71	109	UC	--	380					
	0.50						13	38-39											
40							14	43-44	64	63	103	UC	--	545					
50							15	48-49											

Comments: Latitude: 30° 00.424' N
Longitude: 90° 01.196' W
Victoria Pump Station

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

SEWERAGE & WATER BOARD OF NEW ORLEANS
WASTEWATER REHABILITATION PROGRAM
DESIGN PACKAGE NO. 4
NEW ORLEANS, LOUISIANA

(Sheet 2 of 2)

Ground Elev.: **Datum:** **Gr. Water Depth:** See Text **Job No.:** 20701 **Date Drilled:** 8/18 & 19 /09 **Boring:** 3 Refer to "Legends & Notes"

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density Dry	Density Wet	Shear Tests Type	Shear Tests ø	Shear Tests C	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI		Other Tests
50					Stiff dark gray clay w/sandy silt pockets & organic matter	CH													
	0.50						16	53-54	50	76	114	UC	--	1119					
					Stiff greenish-gray clay w/sandy silt pockets & silt lenses	CH													
60	2.50						17	58-59	25	103	129	UC	--	1485					
	4.50						18	63-64	27	98	124								
					Medium stiff dark gray clay w/silt lenses	CH													
70	1.00						19	68-69	43	81	116	UC	--	873					
	0.50				w/silty sand pockets & silt lenses		20	73-74	41	81	115	UC	--	742					
					Loose to medium dense gray sand (No recovery)	SP													
80		84=11"			Very dense gray sand	SP	21	78.5-80											
		44			Dense dark gray silty sand	SM	22	83.5-85											
		70=8"			Very dense dark gray silty sand w/clay pockets & trace of shell fragments	SM	23	88.5-90											
90		79			w/shell fragments		24	93.5-95											
100		80=11"					25	98.5-100											

Comments: Latitude: 30° 00.424' N
Longitude: 90° 01.196' W
Victoria Pump Station

LEGEND AND NOTES FOR LOG OF BORING AND TEST RESULTS

PP Pocket penetrometer: Resistance in tons per square foot

SPT Standard Penetration Test: Number of blows of a 140-lb hammer dropped 30 inches required to drive 2-in. O.D., 1.4-in. I.D. sampler a distance of 1 foot into the soil after first seating it 6 inches

SPLR Type of Sampling: Shelby, SPT, Auger, No sample

SYMBOL Clay, Silt, Sand, Peat/Humus, Shells, Stone/Gravel

Predominant type shown heavy; Modifying type shown light

USC Unified Soil Classification

DENSITY Unit weight in pounds per cubic foot

SHEAR TESTS

TYPE
- UC Unconfined compression shear
- OB Unconsolidated undrained triaxial compression shear on one specimen confined at the approximate overburden pressure
- UU Unconsolidated undrained triaxial compression shear
- CU Consolidated undrained triaxial compression shear
- DS Direct shear

- Ø Angle of internal friction in degrees
- c Cohesion in pounds per square foot

ATTERBERG LIMITS
- LL Liquid Limit
- PL Plastic Limit
- PI Plasticity Index

OTHER TESTS
- CON Consolidation
- PD Particle size distribution (sieve and/or hydrometer)
- k Coefficient of permeability in centimeters per second
- SP Swelling pressure in pounds per square foot

Other laboratory test results reported on separate figures

GENERAL NOTES

(1) If a ground water depth is shown on the boring log, these observations were made at the time of drilling and were measured below the existing ground surface. These observations are shown on the boring logs. However, ground water levels may vary due to seasonal fluctuations and other factors. If important to construction, the depth to ground water should be determined by those persons responsible for construction immediately prior to beginning work.

(2) While the individual logs of borings are considered to be representative of subsurface conditions at their respective locations on the dates shown, it is not warranted that they are representative of subsurface conditions at other locations and times.

STRUCTURAL

STATE OF LOUISIANA — M. B. SHUKLA — REG. No. 17008 — REGISTERED PROFESSIONAL ENGINEER — CIVIL ENGINEERING — 6/5/13

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACTS 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

BORING LOGS

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR.
TRC.
CK.
AP.
SCALE: AS SHOWN
DATE: JANUARY 2012

GENERAL SUPERINTENDENT

DWG. No. 12039-W-63

SET NO. SHEET NO. 13

PRINTED May 31, 2013 - 9:06am FILENAME - J:\6005.1-GOSHEP-2013\Contract 3668 - Victoria SPS\SHT 13_VIC_BORING.dwg

I. GENERAL NOTES:

1.) STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE FOLLOWING:

NEW ORLEANS STANDARD BUILDING CODE 2007 W/ AMENDMENTS
INTERNATIONAL BUILDING CODE 2009
AMERICAN SOCIETY OF CIVIL ENGINEERS ASCE 7-05
AMERICAN CONCRETE INSTITUTE ACI 318-08
AMERICAN WELDING SOCIETY AWS D1.1-2004
AMERICAN INSTITUTE OF STEEL CONSTRUCTION 13TH EDITION
MASONRY STANDARD JOINT COMMITTEE TMS 402-08/ACI-530.1-8

2.) CONTRACTOR TO VERIFY EXISTING CONDITIONS, VERIFY DIMENSIONS, ELEVATIONS AND SHALL REPORT ANY INCONSISTENCIES TO THE BOARD ENGINEER.

3.) THE LOCATIONS OF UTILITIES AS SHOWN IS APPROXIMATE. ALL UNDERGROUND ELEVATIONS (PIPE, CONDUIT, ETC.) SHOWN ON THE DRAWINGS SHALL BE VERIFIED ON THE JOB SITE BY CONTRACTOR.

4.) ELEVATIONS ARE CAIRO DATUM ADJUSTED FROM NAVD88 DATUM OBTAINED FROM OPUS PROCESSING OF GPS OBSERVATION DATA COLLECTED ON JULY 8, 2009 AND PROCESSED ON JULY 9, 2009.

5.) ALL SHEETING AND BRACING REQUIRED FOR EXCAVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR & SHALL BE DESIGNED BY A REGISTERED LOUISIANA PROFESSIONAL ENGINEER.

6.) ALL FORMWORK AND TEMPORARY STRUCTURES SHALL BE DESIGNED IN ACCORDANCE WITH ASCE-37-02, DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION.

II. PILE NOTES:

1.) ALL PILES SHALL BE PRESTRESSED CONCRETE PILES, UNLESS NOTED OTHERWISE.

2.) TENSION CONNECTORS SHALL BE PROVIDED AS SHOWN ON THE PLANS.

3.) CONCRETE STRENGTH SHALL BE 5000 PSI AT 28 DAYS.

4.) STRANDS SHALL BE LOW RELAXATION 270 KSI PER ASTM A416.

5.) TIMBER PILES SHALL BE IN CONFORMANCE WITH ASTM D25.

6.) PILE TIP ELEVATIONS ARE FINAL. PILE TIPS ARE DETERMINED BY USING A FACTOR OF SAFETY OF 3.0 NO LOAD TEST IS REQUIRED.

7.) CONTRACTOR SHALL PROBE @ PILE LOCATIONS TO ENSURE THERE ARE NO SUBSURFACE OBSTACLES.

III. STRUCTURAL STEEL NOTES:

1.) WIDE FLANGE BEAMS FOR OPERATING FLOOR SHALL BE ASTM A992 WITH MINIMUM YIELD STRENGTH OF 50 KSI. ALL OTHER STEEL SHALL CONFORM TO ASTM A36 WITH MINIMUM YIELD STRENGTH OF 36 KSI. STRUCTURAL PIPING SHALL CONFORM TO ASTM A53, GRADE B. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500.

2.) WELDING SHALL BE ARC WELDING USING E70 ELECTRODES IN ACCORDANCE WITH AWS D.1.1 AND MUST BE MADE WITH CERTIFIED WELDERS. REMOVE PAINT IN AREAS TO BE WELDED. ALL WELDS SHALL BE CONTINUOUS UNLESS NOTED OTHERWISE.

3.) BOLTS SHALL BE ASTM A325 AND ANCHOR BOLTS SHALL BE ASTM F1554, GRADE 55 ksi HEX HEADED NUTS & WASHERS. ANCHOR RODS AND ALL EXPOSED BOLTS, NUTS, AND WASHERS SHALL BE HOT-DIPPED GALVANIZED, UNLESS NOTED OTHERWISE.

4.) STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SECTION 11 OF THE SPECIFICATIONS UNLESS SHOWN ON DRAWINGS TO BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL. STAINLESS STEEL BOLTS SHALL BE MADE FROM ALLOY 304 OR 316 WITH ASTM F593 NUTS.

5.) TO PREVENT CORROSION BY MOISTURE BETWEEN STEEL SURFACES IN CONTACT, ALL SUCH CONTACTS SHALL BE SEALED WATERTIGHT BY RUNNING A CONTINUOUS 1/8" FILLET WELD ALONG ALL EDGES OF THE CONTACT, UNLESS OTHERWISE NOTED.

IV. MASONRY NOTES:

1.) CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 OR APPROVED EQUAL. MORTAR FOR MASONRY SHALL CONFORM TO FOLLOWING REQUIREMENTS:
MORTAR SHALL BE TYPE M OR S WITH A MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 1800 PSI.
JOINT REINFORCEMENT SHALL CONFORM TO ASTM A951 AND SHALL EITHER BE TRUSS TYPE OR LADDER TYPE.

2.) REINFORCING BARS/TIE RODS ARE REQUIRED ON EACH SIDE OF OPENING:
OPENINGS OF 4'-0" OR SMALLER = 1 #5 EACH SIDE
OPENINGS OF 4'-0" OR LARGER = 2 #5 EACH SIDE

3.) GROUT SHALL CONFORM TO ASTM C476. GROUT PLACEMENT SHALL BE ACCORDING TO MINIMUM SPACE REQUIREMENTS AS PER FOLLOWING TABLE:

GROUT TYPE	MAX. GROUT POUR HEIGHT (FEET)	MINIMUM GROUT SPACE DIMENSIONS OF HOLLOW LIMITS (INCH)
FINE	1	1 1/2 x 2
FINE	5	2 x 3
FINE	12	2 1/2 x 3
COARSE	1	1 1/2 x 3
COARSE	5	2 1/2 x 3
COARSE	12	3 x 3

V. TIMBER NOTES:

1.) WOOD FRAMING FABRICATION AND ERECTION SHALL CONFORM TO NATIONAL DESIGN SPECIFICATIONS.

2.) FRAMING SHALL BE OF SOUTHERN PINE NO. 2 DENSE. TIMBER SHALL HAVE A MINIMUM ALLOWABLE STRESSES AS FOLLOWS:

DESCRIPTION	2x6	2x10
EXTREME FIBER STRESS IN BENDING Fb	1,450	1,200
TENSION PARALLEL TO GRAIN Ft	775	625
HORIZONTAL SHEAR Fv	175	175
MODULUS OF ELASTICITY E	1,750,000	1,650,000

3.) PRESERVATIVE TREATED TIMBER SHALL CONFORM TO THE REQUIREMENTS OF APPLICABLE AWPA STANDARDS C1, C2, C9, C15, AND M4 FOR SPECIES, PRODUCT AND PRESERVATIVE AND END USE. PRESERVATIVES SHALL CONFORM TO AWPA P1/P13, P2, P5, P8 AND P9.

4.) TO MAINTAIN STRUCTURAL INTEGRITY IN FRAMING, STUDS IN EXTERIOR AND INTERIOR WALLS ARE PERMITTED TO BE DRILLED OR NOTCHED WITH FOLLOWING LIMITATIONS:

a) BORED HOLE SHALL BE MAXIMUM 2" IN 2x6 STUDS AND NOT LESS THAN 5/8" FROM EDGE.
b) NOTCH SHALL NOT EXCEED 1 3/8" FOR 2x6 STUDS. NOTCH AND HOLE SHALL NOT BE AT SAME LOCATION. IN CASE HOLE OR NOTCH SIZE EXCEEDS THESE LIMITATIONS, THEN PROVIDE DOUBLE STUDS, SIZE OF BORE AND NOTCH SHALL NOT EXCEED BY MORE THAN 50% OF SIZE CALLED OUT.

5.) ALL CONNECTIONS ARE DETAILED USING COMMON NAILS - CONTRACTOR CAN USE OTHER NAILS WITH EQUIVALENT STRENGTH EXCEPT CALLED OUT OTHERWISE. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL CONNECTIONS FOR APPROVAL.

VI. ROOFING NOTES:

1.) ALL ROOFING METAL SHALL BE GAGE METAL THICKNESS AND COATING PER SPECIFICATIONS.

VII. CONCRETE NOTES:

1.) ALL STRUCTURAL CONCRETE SHALL ATTAIN A STRENGTH OF 4000 PSI AT 28 DAYS.

2.) ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60 PROVIDE CORNER BARS @ ALL CORNERS

3.) REINFORCING BARS SHALL BE BENT AS SHOWN ON THE DRAWINGS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE ACI 315. ALL ACCESSORIES SHALL BE PLASTIC TIPPED.

4.) CONCRETE STRUCTURAL DESIGN IS BASED UPON THE LATEST EDITION OF ACI 318.

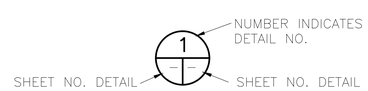
5.) CHAMFER ALL EXPOSED CONCRETE EDGES EXPOSED TO VIEW 3/4" UNLESS NOTED OTHERWISE.

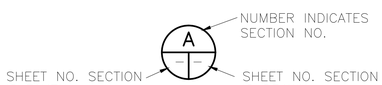
6.) COAT INTERIOR OF PRECAST CONC. MANHOLE AND WET WELL WITH PROTECTIVE COATING. (SEE SPEC'S. SECTION 14)

7.) PRIME PIT FLOOR WITH ONE COAT OF PPG AMERLOCK SEALER. FINISH WITH ONE COAT OF PPG AMERLOCK 400GFK-COLOR OXIDE RED. PREPARE SURFACE AND COAT IN ACCORDANCE w/MANUFACTURE'S RECOMMENDATIONS. (SEE SPEC'S SECTION 11).

8.) REINFORCING BARS AT PIPE AND OTHER MISCELLANEOUS OPENING:
WHEN OPENING SIZE IS EQUAL OR SMALLER THAN BAR SPACING, REBARS IN BOTH DIRECTIONS SHALL BE MOVED AROUND TO RUN CONTINUOUS. FOR PIPE OPENINGS LARGER THAN BAR SPACING, CURTAIL BARS RUNNING INTO OPENING, AND ADD EXTRA EQUAL NUMBER OF BARS EACH SIDE OF OPENING. AREA OF ADDED BARS SHALL EQUAL OF EXCEED CURTAILED BARS.

CROSS REFERENCES





BUILDING IS DESIGNED FOR THE FOLLOWING LOADING:

1.) ROOF	LIVE LOAD	=	20 PSF
FIRST FLOOR	LIVE LOAD	=	200 PSF
	PUMP PIT FLOOR	=	250 PSF
2.) WIND LOADING	BASIC WIND SPEED	=	130 MPH
	EXPOSURE	=	B
	IMPORTANCE FACTOR	=	1.15

NOTES:

1.) USE THE BASIC TABLE IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
A) CENTER TO CENTER BAR SPACING LATERALLY IS AT LEAST 3 BAR DIAMETERS.
B) DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2 BAR DIAMETERS.

2.) THE ALTERNATE TABLE MAY BE USED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
A) CENTER TO CENTER BAR SPACING LATERALLY IS AT LEAST 5 BAR DIAMETERS.
B) DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2.5 BAR DIAMETERS.

3.) IF CONCRETE COVER OR EDGE DISTANCE IS LESS THAN 1 BAR DIAMETER OR THE CENTER TO CENTER BAR SPACING LATERALLY IS LESS THAN 3 DIAMETERS, SEE ACI 318 FOR APPROPRIATE GUIDANCE.

4. TOP BARS ARE HORIZONTAL BARS AND BARS INCLINED LESS THAN 45 DEGREES WITH RESPECT TO A HORIZONTAL PLANE WHICH ARE PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

5. THE TABLES SHOWN ABOVE ARE FOR NORMAL WEIGHT CONCRETE AND UNCOATED REINFORCING BARS. IF EPOXY COATED BARS ARE USED, SEE ACI 318 FOR ADDITIONAL CONSIDERATIONS.

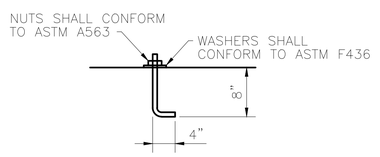
REINFORCEMENT EMBEDMENT AND SPLICE TABLE - 4000 PSI

BAR SIZE	BASIC TABLE: MINIMUM EMBEDMENT LENGTH, INCHES		BASIC TABLE: MINIMUM LAP LENGTH, INCHES		ALTERNATE TABLE: MINIMUM EMBEDMENT LENGTH, INCHES		ALTERNATE TABLE: MINIMUM LAP LENGTH, INCHES	
	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER
3	18	14	24	18	15	12	20	15
4	25	19	32	25	20	15	26	20
5	31	24	40	31	25	19	33	25
6	36	28	47	36	29	22	38	29
7	54	41	69	53	43	33	56	43
8	61	47	79	61	49	38	64	49
9	69	53	90	69	55	42	72	55
10	78	60	101	78	62	48	81	62
11	86	66	112	86	69	53	90	69

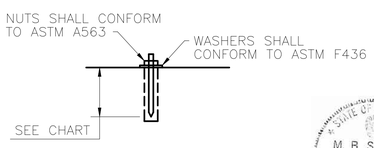
POST-INSTALLED ANCHOR BOLT DETAILS

LOCATION	TYPE	SIZE	ALLOWABLE LOADS IN LBS: TENSION	ALLOWABLE LOADS IN LBS: SHEAR
MONORAIL COLUMN AND PLATFORM FRAMING	HIT-RE 500 ADHESIVE ANCHOR CARBON STEEL	3/4"ø x 6 3/4"	10,755	17,840
EXHAUST BLOWER AND SAFETY CHAIN LADDER	HIT-ICE/HIT-HY 150 STAINLESS STEEL	1/2"ø x 4 1/4"	1,785	2,020
LADDER	KWIK BOLT 3 STAINLESS STEEL	1/2"ø x 4 3/4"	2,510	3,580
GATE VALVE	KWIK BOLT 3 STAINLESS STEEL	5/8"ø x 4"	3,340	4,870
C8x11.5 AT LADDER	KWIK BOLT 3 CARBON STEEL	3/4"ø x 4 3/4"	5,285	7,325

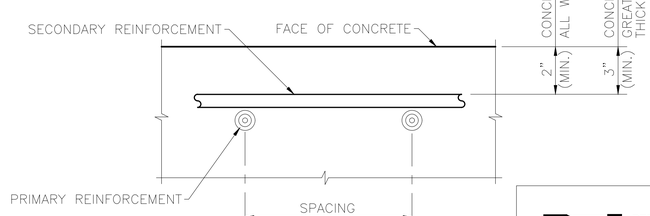
THE BOLTS ARE DESIGNED USING ABOVE FORCES FROM HILTI 2008 CATALOG.
CONTRACTOR MAY PROVIDE ALTERNATE BOLTS WITH EQUAL OR HIGHER STRENGTH.
CARBON STEEL BOLTS SHALL HAVE ELECTRO DEPOSITED ZINC COATING.



TYPICAL CAST IN PLACE ANCHOR BOLT DETAIL
NOT TO SCALE



POST INSTALLED ANCHOR BOLT DETAIL
NOT TO SCALE



REINFORCEMENT CLEARANCE DETAIL
NOT TO SCALE

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
11/24/2015

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

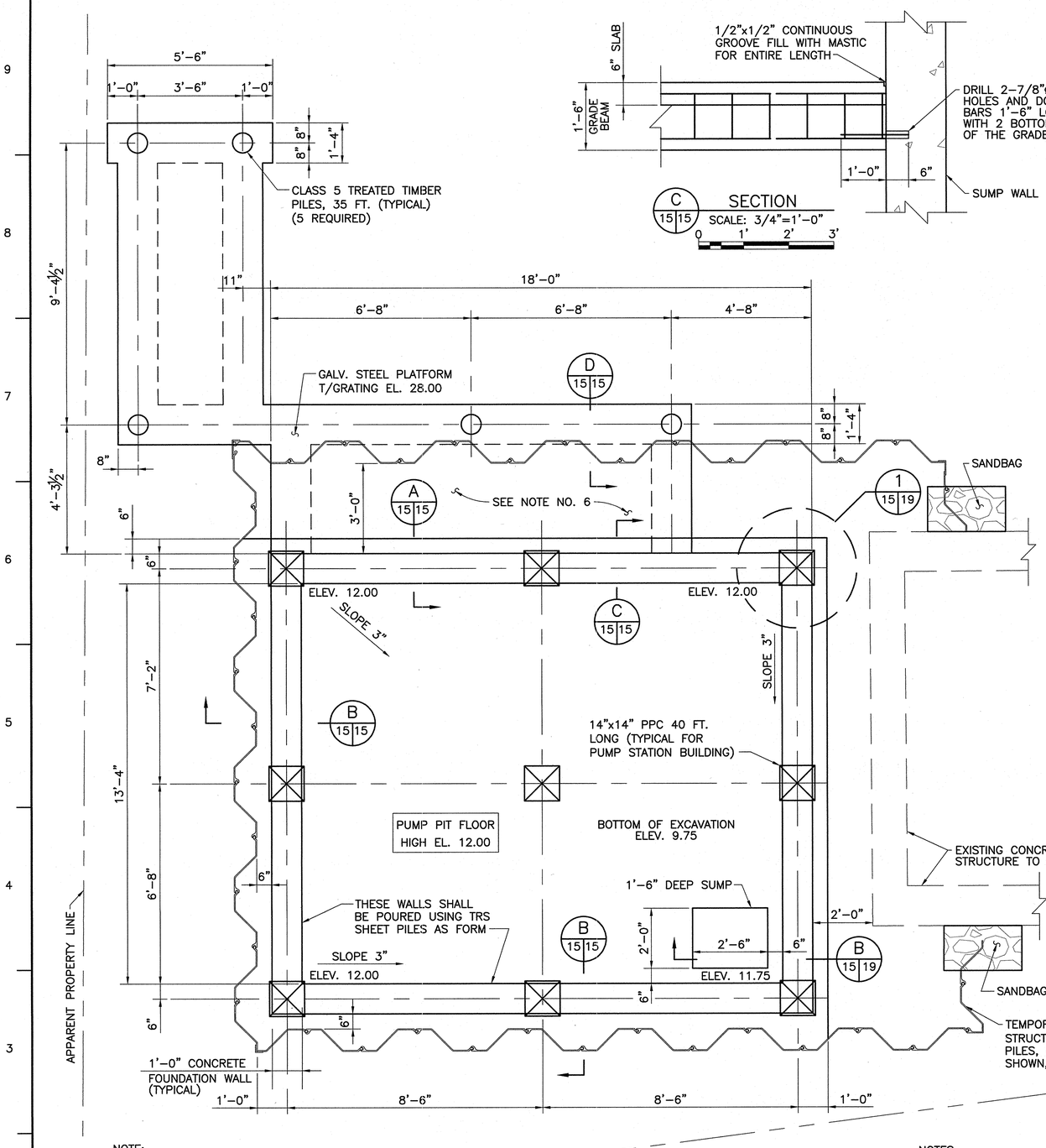
CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

STRUCTURAL NOTES

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. MZ	
TRC. — —	
CK. MS/AR	GENERAL SUPERINTENDENT
AP. JH	
SCALE: AS SHOWN	DWG. No. 12039-W-63
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 14

PRINTED Sep 26, 2013 - 11:06am FILENAME - J:\6005.1-(CONFORMED DRAWINGS)\Contract 3668 - Victoria SPS\SHT 14_VIC_STRUC NOTES.dwg



NOTE:
FOR GRADE BEAMS, PLATFORM AND STAIRS, SEE SHEET 20.

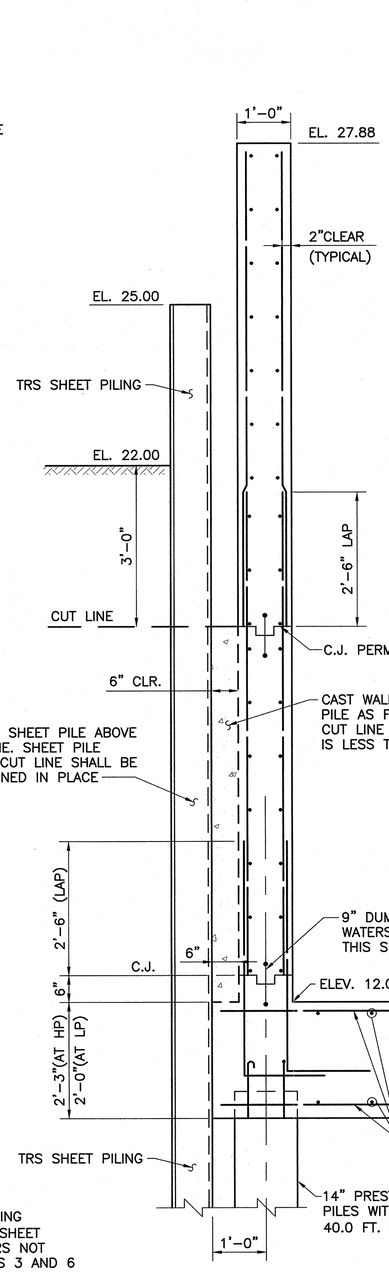
FOUNDATION PLAN AT PIT FLOOR AND PLATFORM

SCALE: 1/2" = 1'-0"

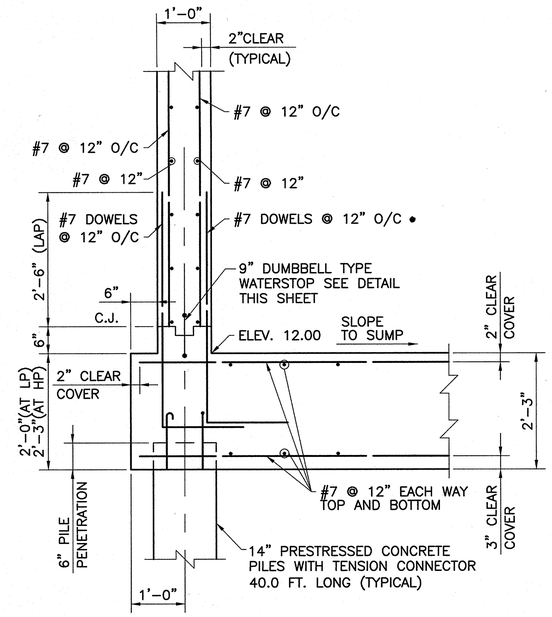
0 2' 4'

N

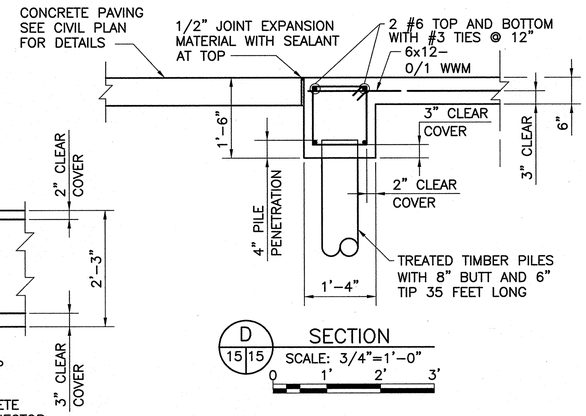
NOTE:
HP HIGH POINT
LP LOW POINT



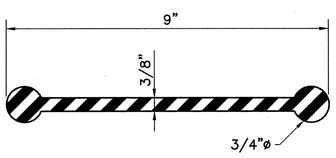
B 15|15 SECTION
SCALE: 3/4"=1'-0"
0 1' 2' 3'



A 15|15 SECTION
SCALE: 3/4"=1'-0"
0 1' 2' 3'



D 15|15 SECTION
SCALE: 3/4"=1'-0"
0 1' 2' 3'



THREE BULB WATERSTOP

NOT TO SCALE

NOTES:

1.) SPACING AT BOTTOM BARS TO VARY AT PILES TO GIVE 2" CLEARANCE AT PILES TOTAL NUMBER OF BARS AT BOTTOM SHALL BE SAME AS TOP.

2.) PILE LENGTHS ARE COMPUTED USING A FACTOR OF SAFETY OF 3.0 NO LOAD TEST IS REQUIRED.

3.) TRS LAYOUT AND SHEET PILE LENGTH ARE PROVIDED FOR BIDDING PURPOSES ONLY. SEE SPECIFICATIONS. FOR FINAL DESIGN CONTRACTOR SHALL SUBMIT DESIGN AND DRAWING PREPARED BY A REGISTERED ENGINEER IN STATE OF LOUISIANA FOR APPROVAL. TRS SHEET PILE SHALL BE CUT MINIMUM 3'-0" BELOW GRADE EXCEPT AT LOCATIONS WHERE CONDUITS OR PIPES CROSS THE SHEET PILING. AT THESE LOCATIONS, SHEET PILING SHALL BE CUT 12" BELOW THE BOTTOM OF THE CROSSING CONDUIT OR PIPE. STAIR AND PLATFORM SLAB SHALL BE CAST AFTER SHEET PILES ARE CUT OFF.

4.) CONTRACTOR SHALL VERIFY LOCATION OF ABANDONED TIMBER PILE AND NOTIFY ENGINEER IN CASE OF ANY VARIATION.

5.) MINIMUM TIP EL. FOR TRS SHEET PILE LENGTH SHALL BE EL. (–)5.00'

6.) BACKFILL ANNULAR SPACE BETWEEN SHEET PILES AND CONCRETE WALL WITH GRANULAR MATERIAL COMPACTED TO 95% MAXIMUM DRY DENSITY AT OMC.

7.) GRANULAR MATERIAL SHALL BE NON PLASTIC, FREE OF DELETERIOUS MATERIALS WITH NO MORE THAN 10% BY WEIGHT PASSING A US 200 MESH SIEVE MAXIMUM ORGANIC CONTENT 5% BY WEIGHT.

LEGEND:

PILES W/ TENSION ANCHORS
P.C.O. EL. 10.25

TREATED TIMBER PILES,
8"ø BUTT, 6"ø TIP, 35' LONG
P.C.O. EL. 20.83

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
6/5/13

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

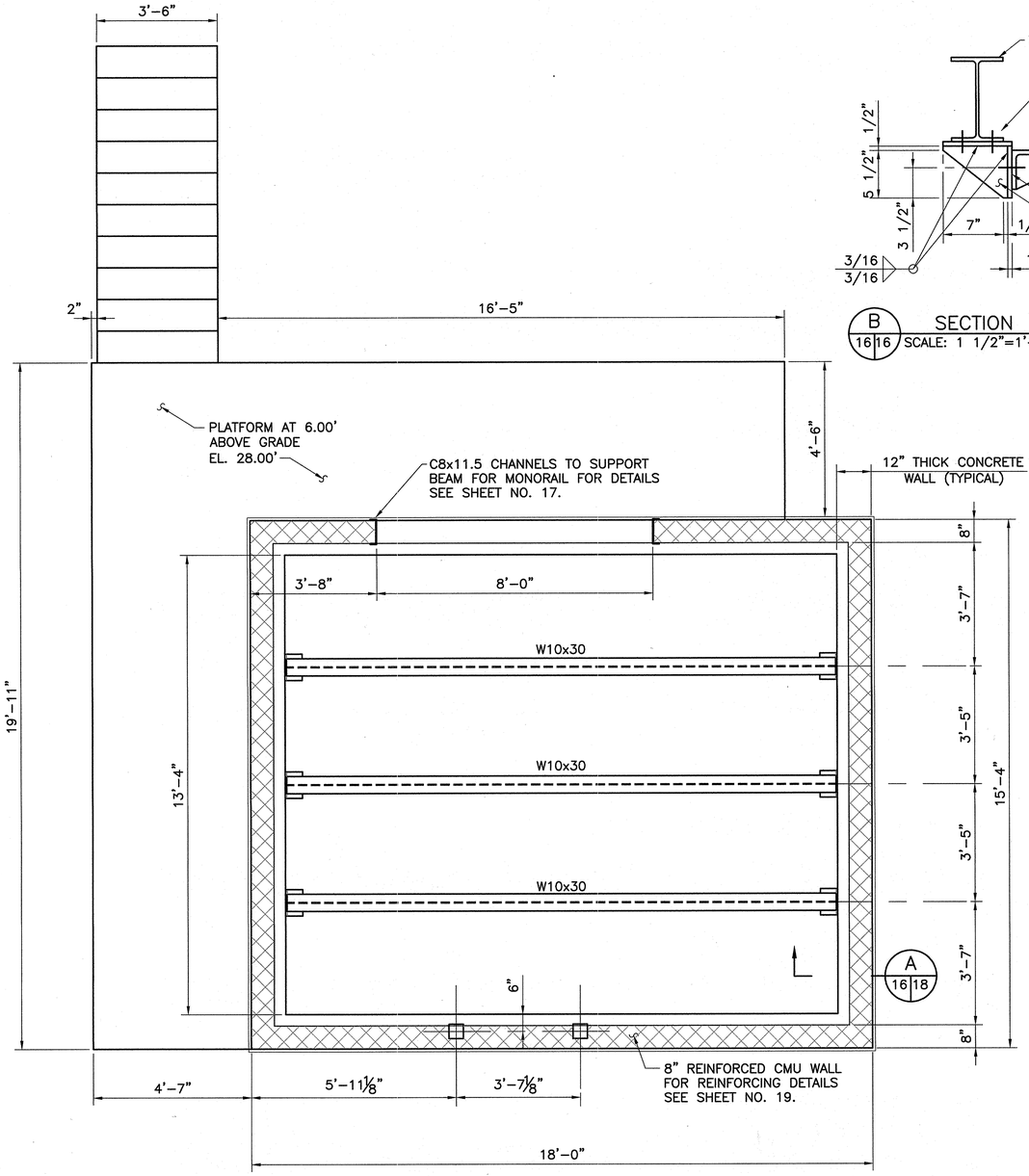
SEWERAGE AND WATER BOARD OF NEW ORLEANS

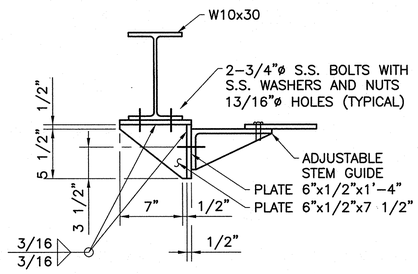
CONTRACT 3368
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

FOUNDATION PLAN AND SECTIONS

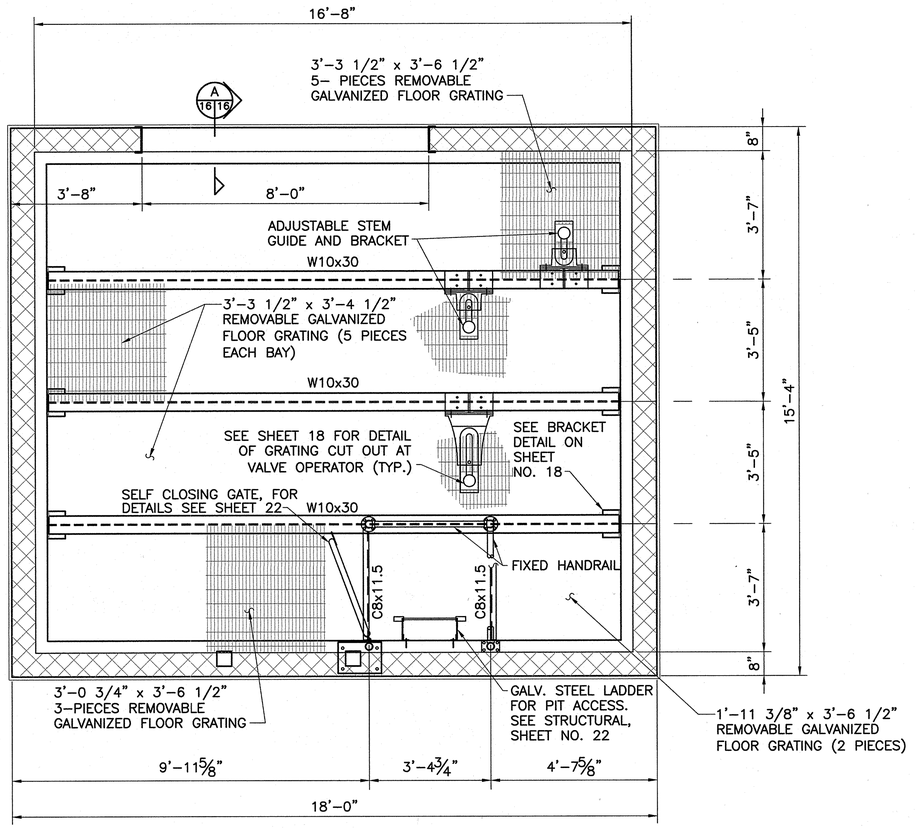
DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. M.Z.	
TRC.	
CK.	GENERAL SUPERINTENDENT
AP.	
SCALE: AS SHOWN	DWG. No. 12039-W-63
DATE: JANUARY 2012	SET NO. / SHEET NO. 15

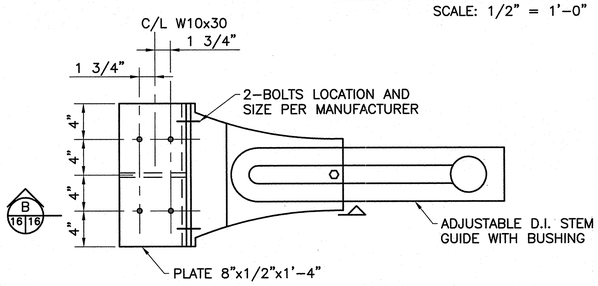




B 16|16 SECTION
SCALE: 1 1/2"=1'-0"



OPERATING FLOOR/GRATING PLAN
SCALE: 1/2" = 1'-0"

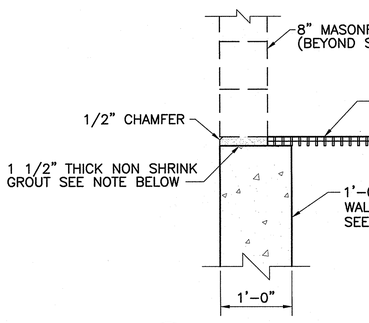


B 16|16

ADJUSTABLE STEM GUIDE AND BRACKET PLAN
SCALE: 1 1/2"=1'-0"

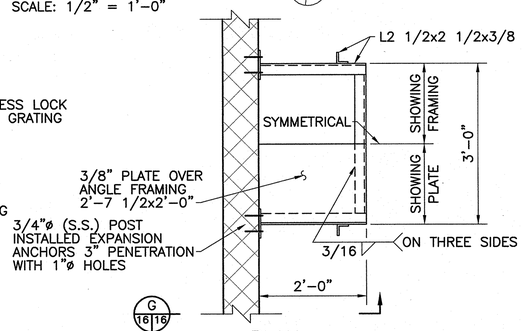
NOTE:
1.) FLOOR BEAMS AND GRATING SHALL HAVE BOLTED CONNECTIONS (REMOVABLE TYPE). ALL BOLTS SHALL CONFORM TO ASTM A307. IF ANOTHER TYPE OF BOLTS ARE USED THE CONTRACTOR SHALL PROVIDE MANUFACTURER'S LITERATURE SHOWING BOLTS ARE REUSABLE TYPE.
2.) THE OPERATING FLOOR SHALL CONSIST OF 20 PANELS, VARYING IN SIZE AS MARKED ON PLAN. SEE SPECIFICATIONS FOR GRATING DETAILS. PANELS SHALL BE ARRANGED TO MAINTAIN 1/2" GAP BETWEEN THEM FOR EASY REMOVAL.
3.) ALL PIECES SHALL BE BANDED ON ALL FOUR SIDES, AND AT CUT-OUTS FOR MONORAIL COLUMNS AND HANDRAIL POSTS.
4.) CUT OUT SHALL BE BANDED ON ALL FOUR SIDES AND LOCATED OVER NRS GATE VALVE OPERATING NUT.

OPERATING FLOOR/FRAMING PLAN
SCALE: 1/2" = 1'-0"



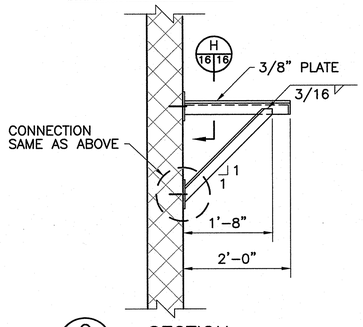
A 16|16 SECTION
SCALE: 1"=1'-0"

NOTE:
CONCRETE SURFACE SHALL BE CLEANED BEFORE POURING GROUT. GROUT SHALL BE PLACED AFTER THE CONCRETE WALL HAS CURED FOR A PERIOD OF 28 DAYS.

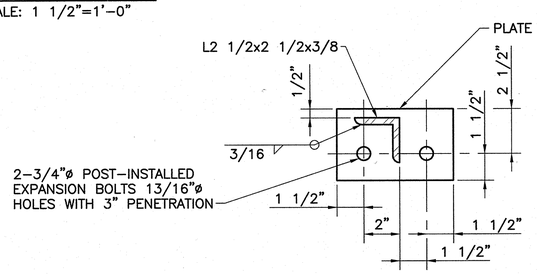


G 16|16 PLAN
SCALE: 3/4"=1'-0"

BRACKET DETAIL



G 16|16 SECTION
SCALE: 3/4"=1'-0"



H 16|16 SECTION
SCALE: 3"=1'-0"
0 3" 6" 9" 12"

STAND DETAIL FOR EXHAUST BLOWER

NOTE:
1.) BOLT SIZE AND SPACING PER MANUFACTURER.
2.) BOLTS IN CMU WALL SHALL BE LOCATED A MINIMUM OF 1" AWAY FROM JOINTS.

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
6/5/13

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

OPERATING FLOOR FRAMING AND GRATING PLAN

DESIGN ENGINEERING INC.
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Metairie, LA 70002
(504) 836-2155

DR. MZ	
TRC.	
CK.	GENERAL SUPERINTENDENT
AP.	DWG. No. 12039-W-63
SCALE: NONE	
DATE: JANUARY 2012	SET NO. / SHEET NO. 16

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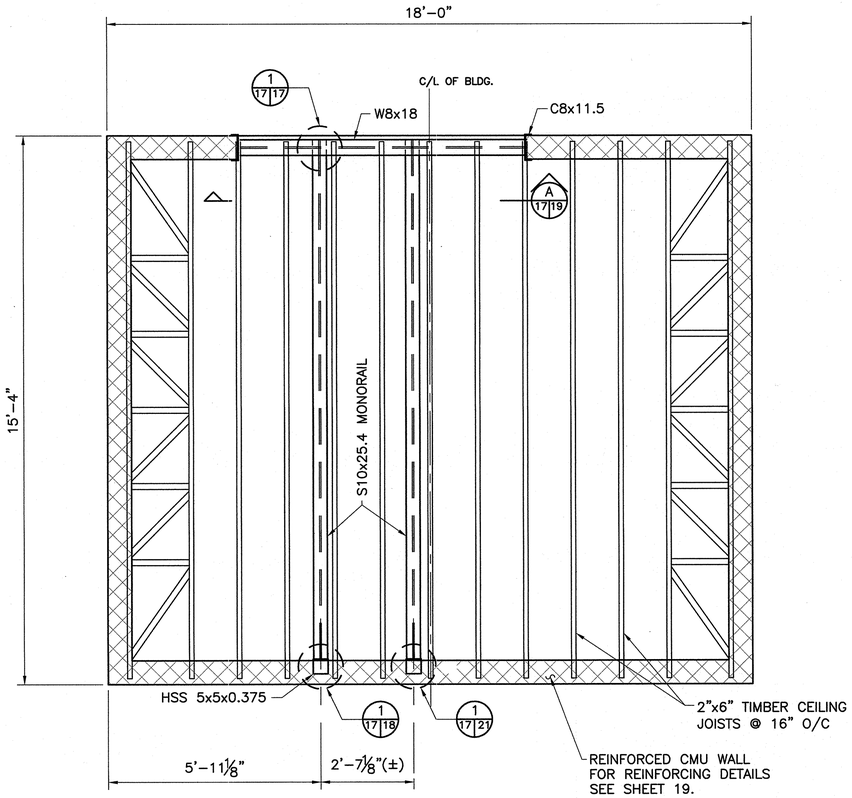
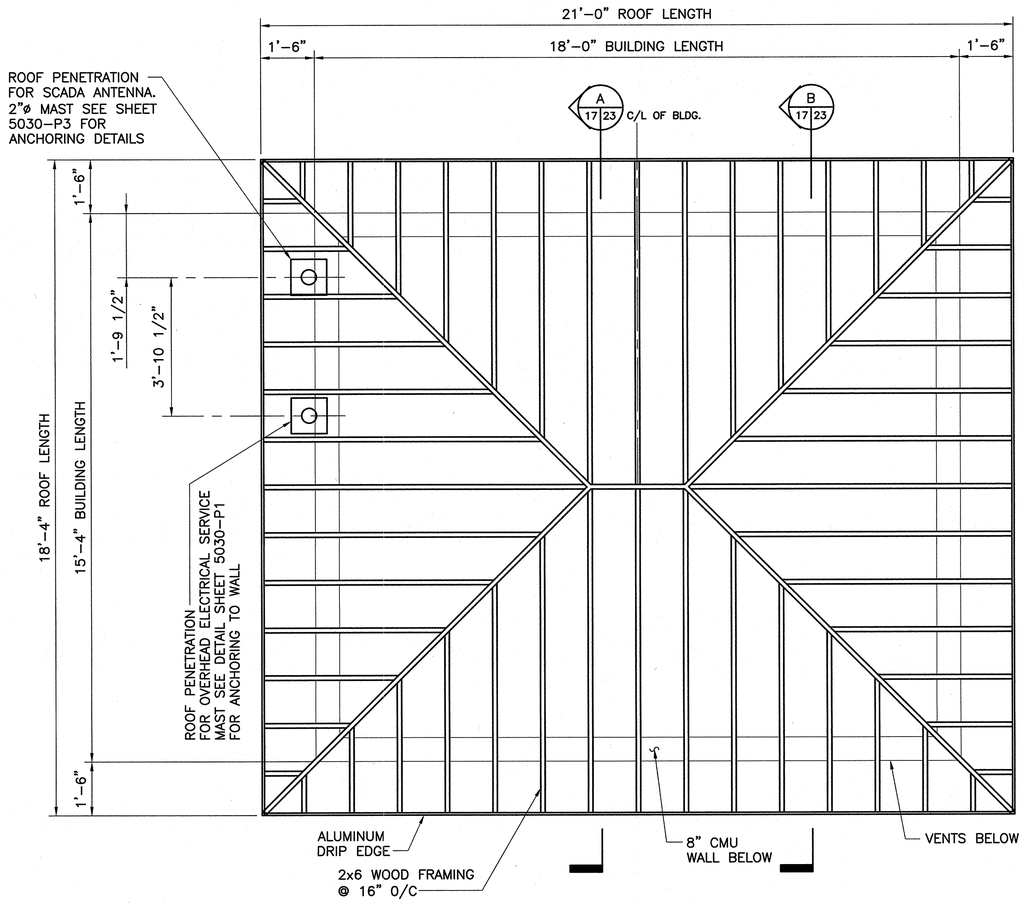
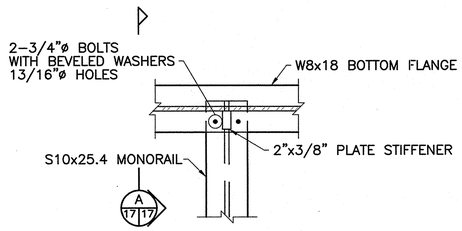


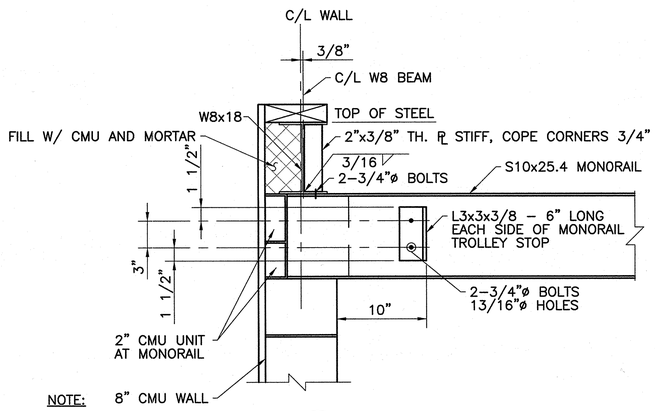
CEILING LEVEL FRAMING PLAN
SCALE: 1/2" = 1'-0"



ROOF FRAMING PLAN
SCALE: 1/2" = 1'-0"



CONNECTION DETAIL 1 (17|17)
SCALE: 1 1/2" = 1'-0"



NOTE:
THE CONTRACTOR SHALL STENCIL MONORAIL CAPACITY OF 1.5 TONS ON EITHER SIDE OF MONORAILS WITH YELLOW PAINT.

SECTION A (17|17)
SCALE: 1 1/2"=1'-0"

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
4/5/13

STRUCTURAL

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SEWERAGE AND WATER BOARD
OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

CEILING LEVEL FRAMING AND ROOF PLAN

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
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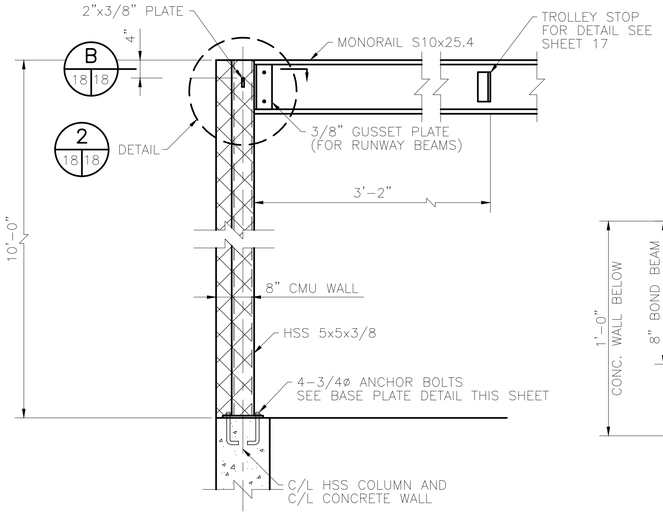
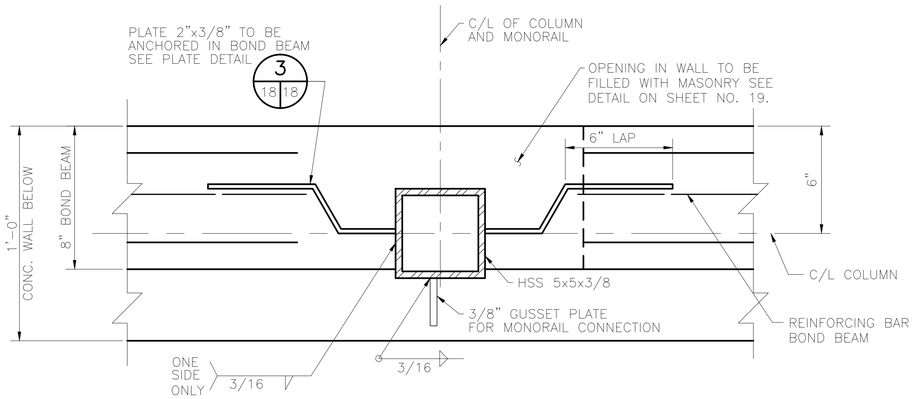
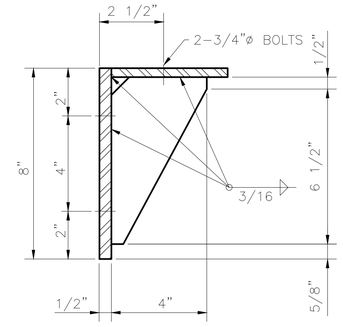
DR. MZ	
TRC. ---	
CK. MS	GENERAL SUPERINTENDENT
AP. MS	
SCALE: AS SHOWN	DWG. No. 12039-W-63
DATE: JANUARY 2012	SET NO. / SHEET NO. 17



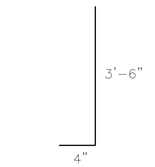
A 18|18 SECTION
SCALE: 3/4"=1'-0"
0 1' 2' 3'



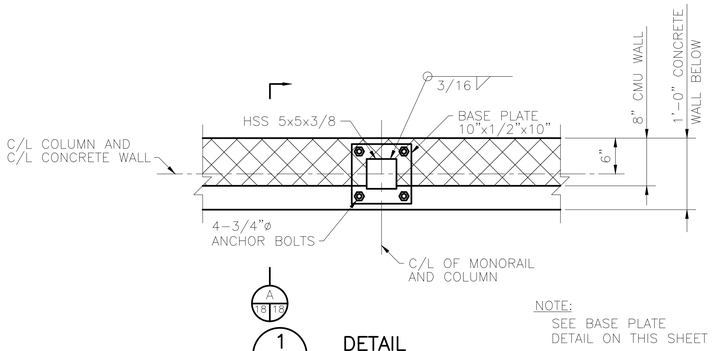
B 18|18 SECTION
SCALE: 3"=1'-0"
0 3" 6" 9" 1'



C 18|18 SECTION
SCALE: 1 1/2"=1'-0"
0 1' 2'

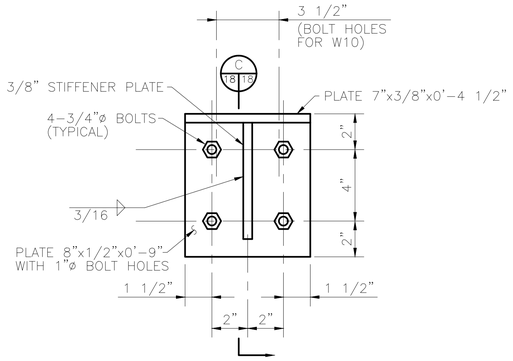


#5 DOWEL
(FOR 8" CMU WALL)

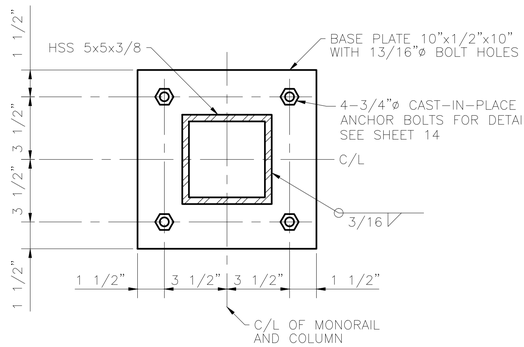


1 17|18 DETAIL
SCALE: 1" = 1'-0"
0 1' 2'

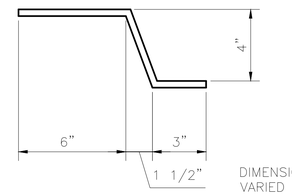
NOTE:
SEE BASE PLATE DETAIL ON THIS SHEET



D 18|18 SECTION
SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 12"

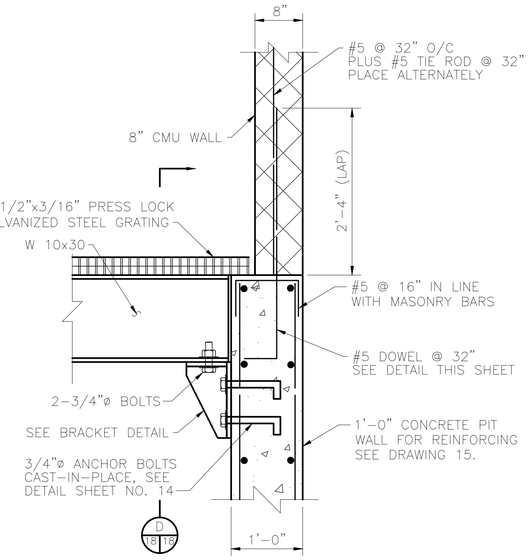


BASE PLATE PLAN
SCALE: 3"=1'-0"
0 3" 6" 9" 12"

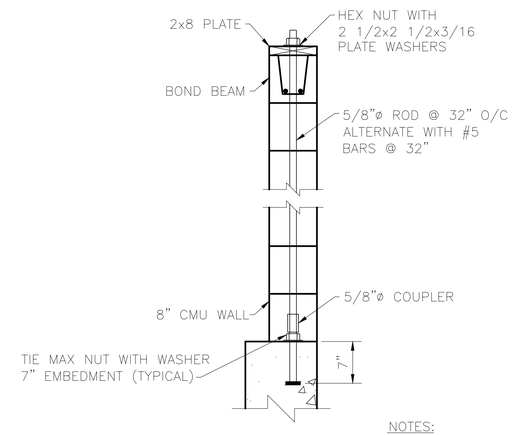


DIMENSION 1 1/2" MAY BE VARIED TO SUIT FIELD CONDITION

DETAIL 3 18|18
SCALE: 3" = 1'-0"

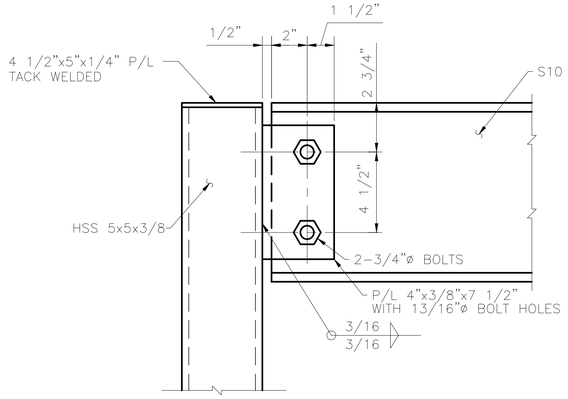


A 16|18 SECTION
SCALE: 1" = 1'-0"
0 1' 2'



NOTES:
1.) TIE RODS AND ASSEMBLY SHALL BE MADE BY "TIE MAX" OR EQUAL, ALLOWABLE PULL = 1,998 LBS.
2.) TIE RODS SHALL BE PROVIDED PER MANUFACTURER'S INSTRUCTIONS.

SECTION @ TIE ROD
SCALE: 1" = 1'-0"
0 1' 2'



2 18|18 DETAIL
SCALE: 3"=1'-0"
0 3" 6" 9" 12"

NOTE:
THE BOLTS CAN BE CAST-IN-PLACE ANCHORS AS SHOWN ON SHEET NO. 14 OR POST-INSTALLED GALVANIZED EXPANSION ANCHORS WITH MINIMUM 6 3/4" PENETRATION IN CONCRETE.

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED PROFESSIONAL ENGINEER
DESIGN ENGINEERING INC.
11/21/2013

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

FRAMING SECTION AND DETAILS – 1

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. LN	
TRC. — —	
CK. MS/AR	GENERAL SUPERINTENDENT
AP. MS	DWG. No. 12039-W-63
SCALE: AS SHOWN	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 18

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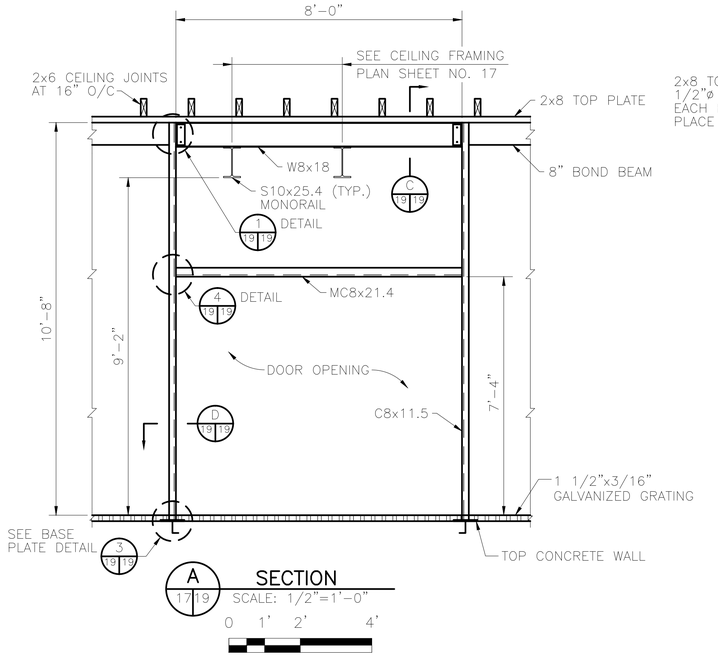
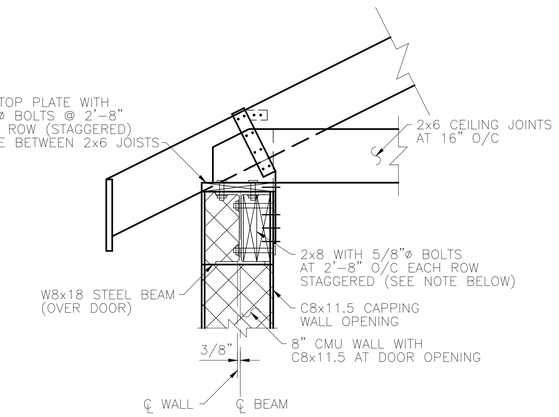


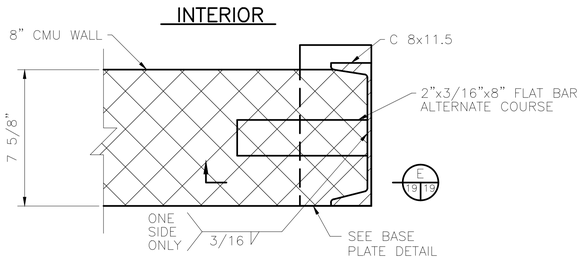
A 17|19 SECTION
SCALE: 1/2"=1'-0"
0 1' 2' 4'



C 19|19 SECTION
SCALE: 1/2"=1'-0"
0 1' 2'

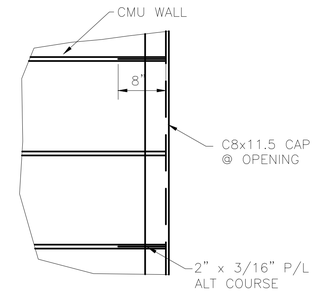
NOTE:
PLACE BOLTS TO LINE UP WITH CEILING JOISTS

INTERIOR

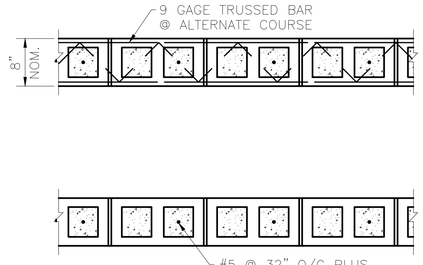


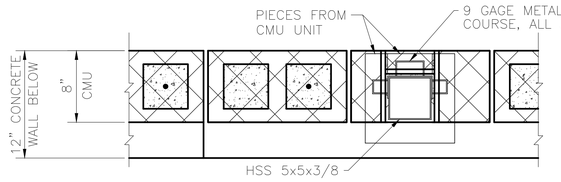
EXTERIOR

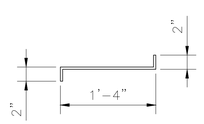
D 19|19 SECTION
SCALE: 3"=1'-0"
0 3" 6" 9" 12"



E 19|19 SECTION
SCALE: 1/2"=1'-0"
0 1' 2'







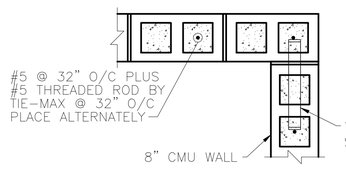
METAL STRAP DETAIL
SCALE: 1"=1'-0"

CMU REINFORCING DETAILS AROUND CRANE COLUMN
SCALE: 1 1/2"=1'-0"
0 1' 2'

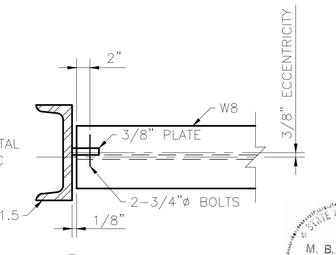
F 19|19 SECTION
SCALE: 3"=1'-0"
0 3" 6" 9" 12"

BASE PLATE DETAIL 3 19|19
SCALE: 3"=1'-0"
0 3" 6" 9" 12"

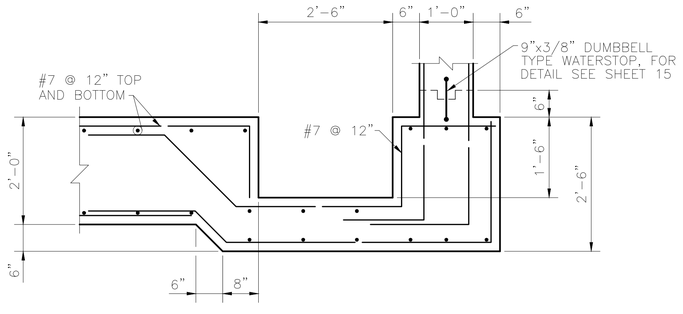
PLAN – CMU WALL SHOWING ALTERNATE COURSES
SCALE: 1"=1'-0"
0 1' 2'



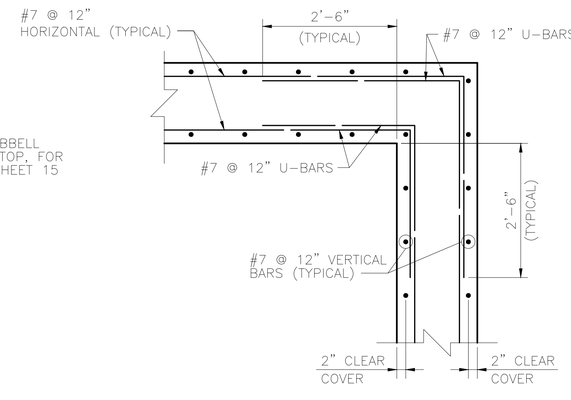
TYPICAL CORNER DETAIL
SCALE: 1"=1'-0"



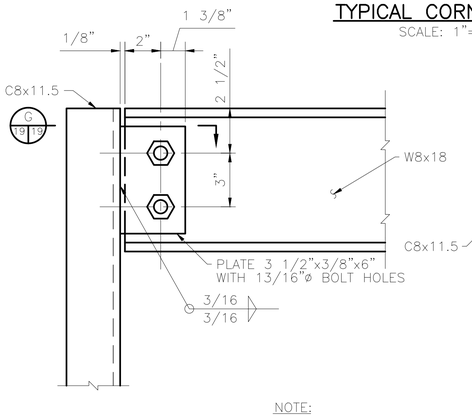
G 19|19 SECTION
SCALE: 1"=1'-0"



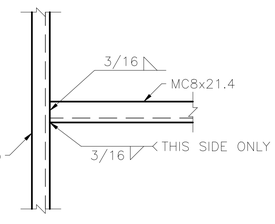
B 15|19 SECTION
SCALE: 3/4"=1'-0"
0 1' 2' 3'



CORNER DETAIL 1 15|19
SCALE: 3/4"=1'-0"
0 1' 2' 3'



1 19|19 DETAIL
SCALE: 3"=1'-0"
0 3" 6" 9" 12"



DETAIL 4 19|19
SCALE: 1/2"=1'-0"

NOTE:
REINFORCING BARS ON EACH SIDE OF OPENING:
OPENINGS OF 4'-0" OR SMALLER = 1 #5 EACH SIDE
OPENINGS OF 4'-0" OR LARGER = 2 #5 EACH SIDE

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

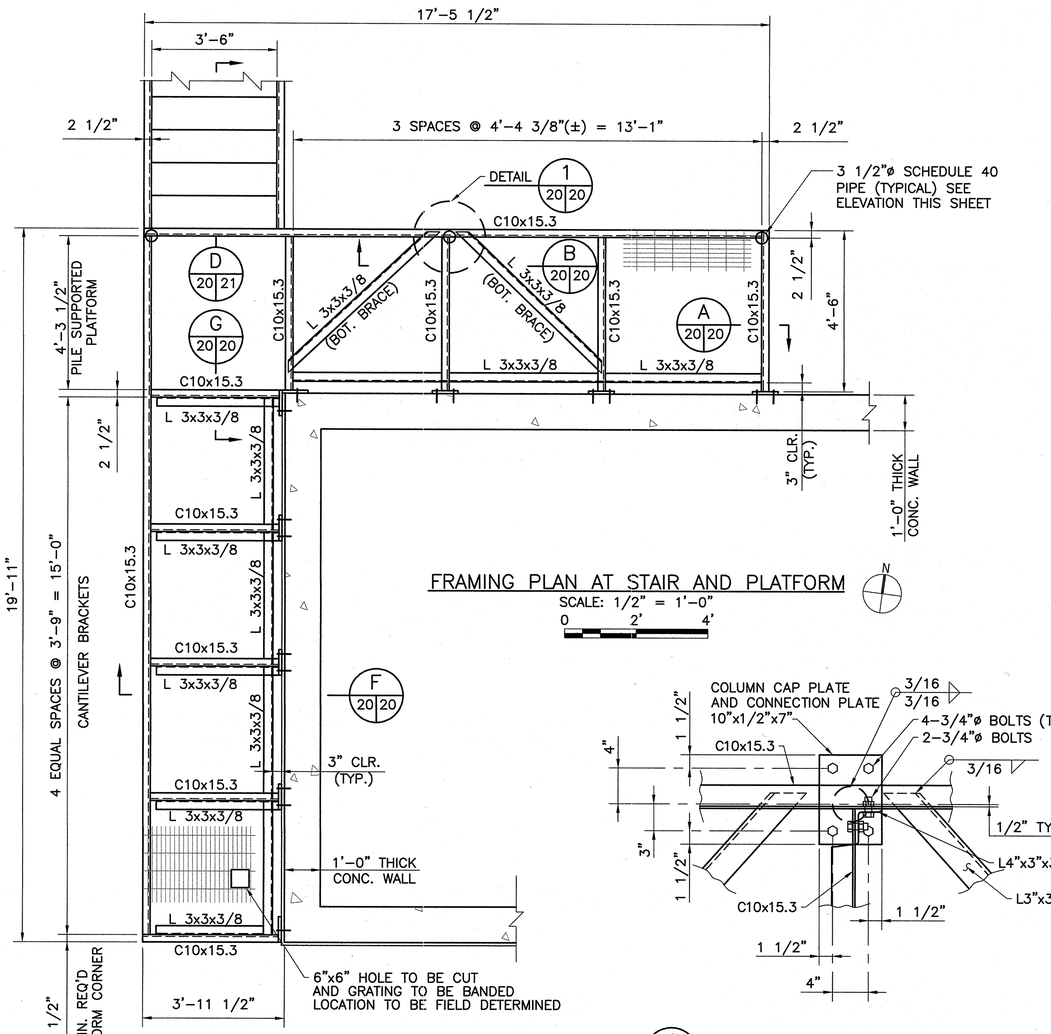
FRAMING SECTIONS AND DETAILS – 2

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

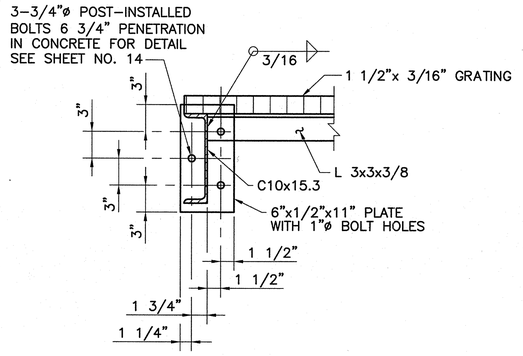
DR. MZ	
TRC. – – – –	
CK. MS	GENERAL SUPERINTENDENT
AP. MS	DWG. No. 12039-W-63
SCALE: AS NOTED	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 19

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
9/24/2013

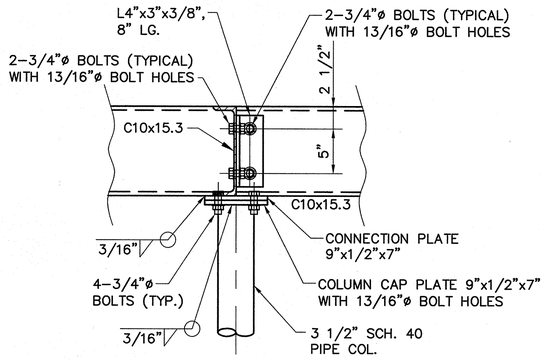
PRINTED Sep 26, 2013 – 11:07am FILENAME – J:\6005.1-(CONFORMED DRAWINGS)\Contract 3668 – Victoria SPS\SHT 19_VIC_FRAM DET2.dwg



FRAMING PLAN AT STAIR AND PLATFORM
SCALE: 1/2" = 1'-0"
0 2' 4'

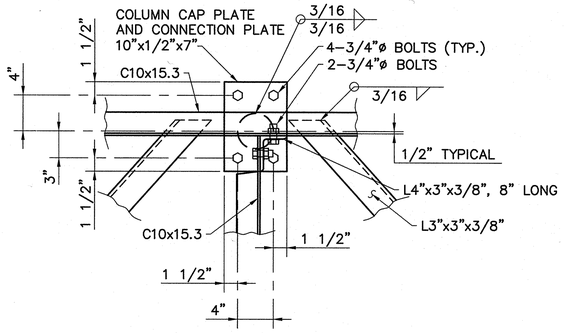


A 20 20 SECTION
SCALE: 1 1/2"=1'-0"

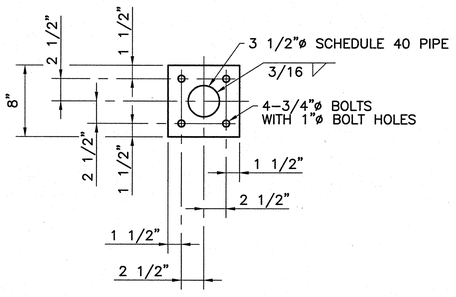


B 20 20 SECTION
SCALE: 1 1/2"=1'-0"

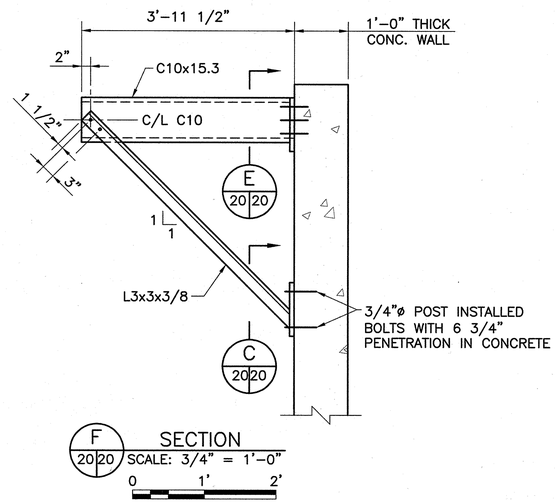
(BOTTOM BRACE L3x3x3/8 NOT SHOWN, SEE DETAIL THIS SHEET.)



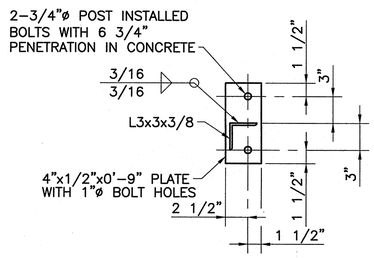
1 20 20 CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



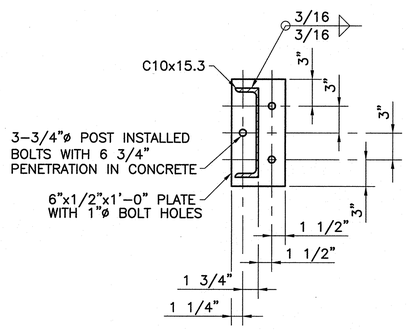
D 20 20 SECTION
SCALE: 1 1/2" = 1'-0"



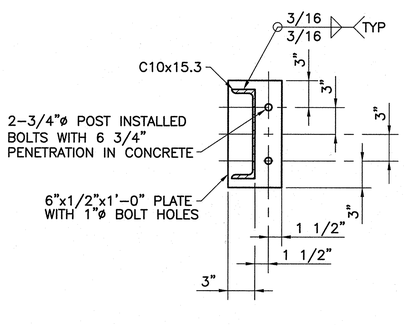
F 20 20 SECTION
SCALE: 3/4" = 1'-0"
0 1' 2'



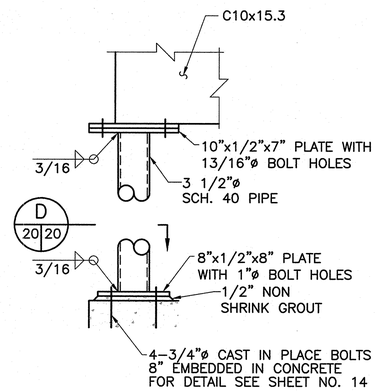
C 20 20 SECTION
SCALE: 1 1/2"=1'-0"



(SEVEN REQUIRED)
E 20 20 SECTION
SCALE: 1 1/2"=1'-0"



(THREE REQUIRED)
G 20 20 SECTION
SCALE: 1 1/2"=1'-0"



TYPICAL ELEVATION
PIPE COLUMNS
SCALE: 1 1/2"=1'-0"

NOTES:

1.) FOR TOP OF SLAB ELEVATION AND GRADING, SEE CIVIL PLANS.

2.) ENTIRE FRAME SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

3.) FRAME MAY BE SPLIT INTO PIECES FOR GALVANIZING AND TRANSPORTATION REASONS. GALVANIZED PIECES SHALL BE FIELD BOLTED, WELDING IS NOT PERMITTED.

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

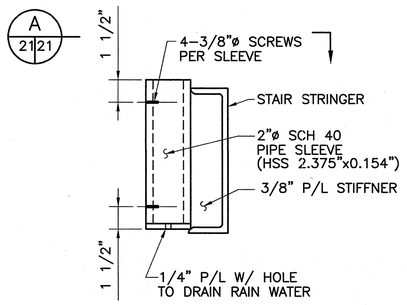
PLATFORM AND STAIR FRAMING PLAN

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
5/15/13

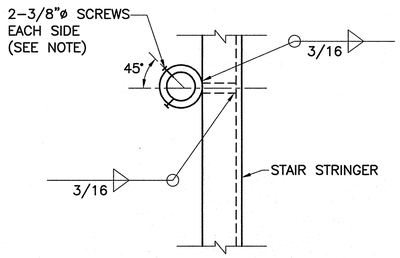
DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. JT	
TRC. -----	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. MS	DWG. No. 12039-W-63
SCALE: AS NOTED	
DATE: JANUARY 2012	SET NO. / SHEET NO. 20

PRINTED May 31, 2013 - 9:14am FILENAME - J:\6005.1-GOSHEP-2013\Contract 3668 - Victoria SPS\SHT 20_VIC_STAIR_SEC_DET.dwg

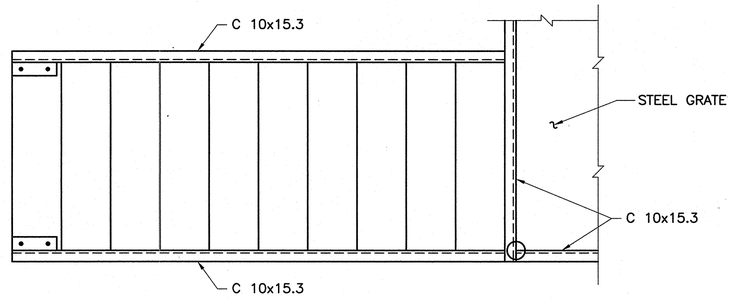


ELEVATION
(HANDRAIL SLEEVE DETAIL)
NOT TO SCALE

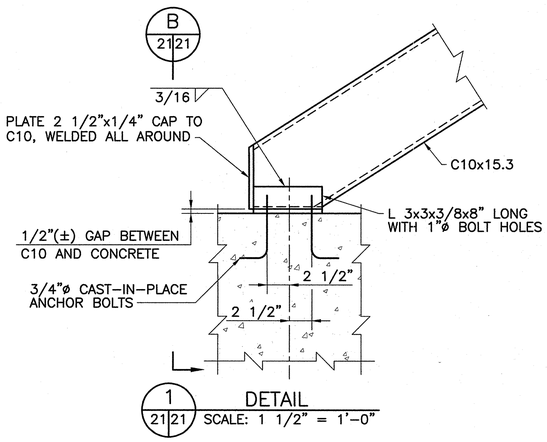


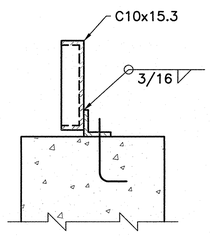
A 21|21 SECTION
NOT TO SCALE

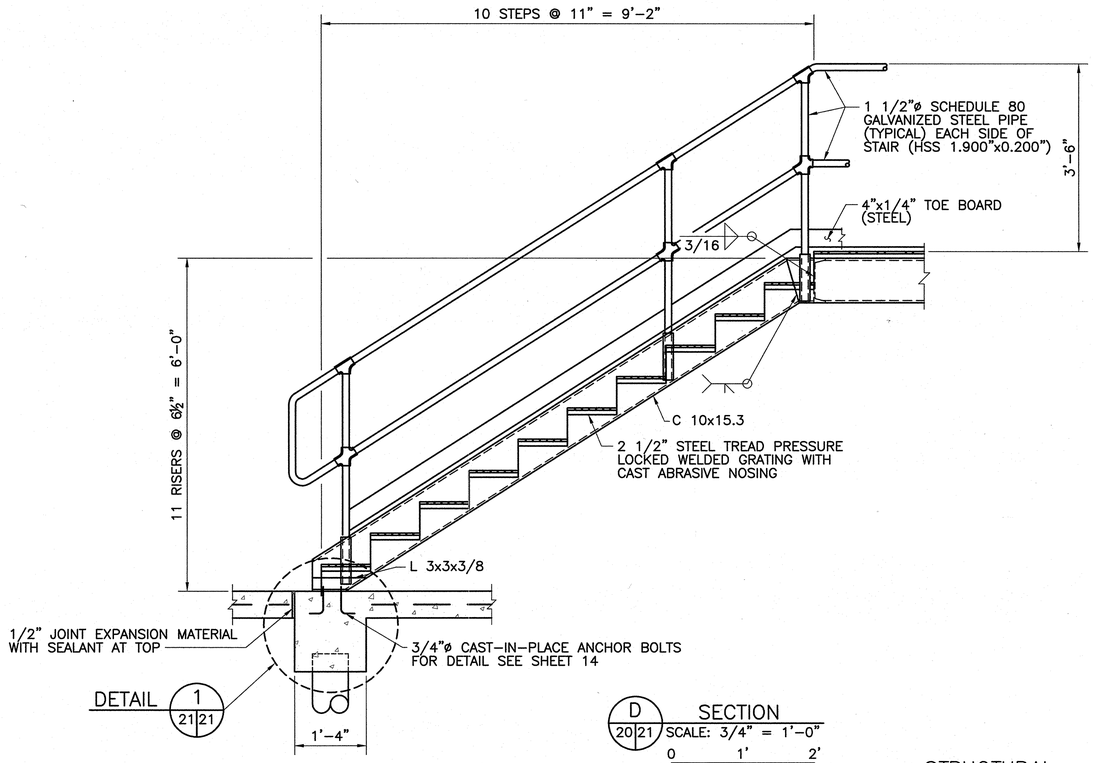
NOTE:
SCREW AND SLEEVE SHALL HAVE COMPATIBLE THREADS, IN CONFORMANCE WITH ANSI STANDARDS

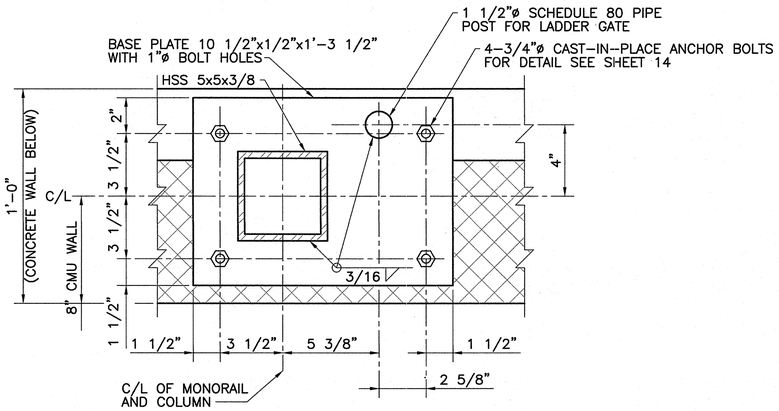


PLAN
SCALE: 3/4" = 1'–0"
0 1' 2' 3'









BASE PLATE DETAIL 1 (17|21, 22)
SCALE: 3"=1'–0"

NOTE:
STRUCTURAL DESIGN OF PLATFORM AND STAIR IS PROVIDED FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT FINAL STRUCTURAL DESIGN FOR APPROVAL. DESIGN SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF LOUISIANA AND EXPERIENCED IN DESIGN OF THIS WORK.

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
6/5/13

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

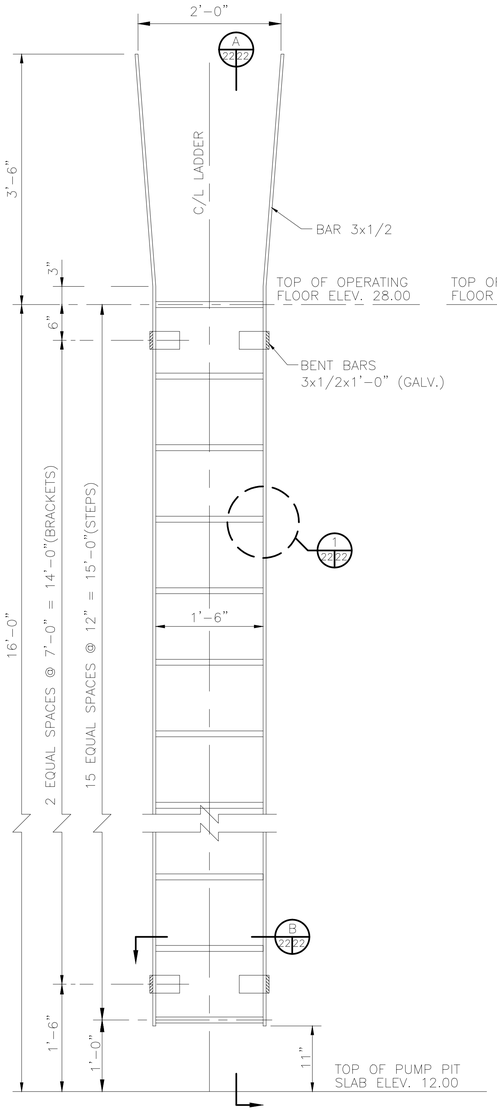
SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

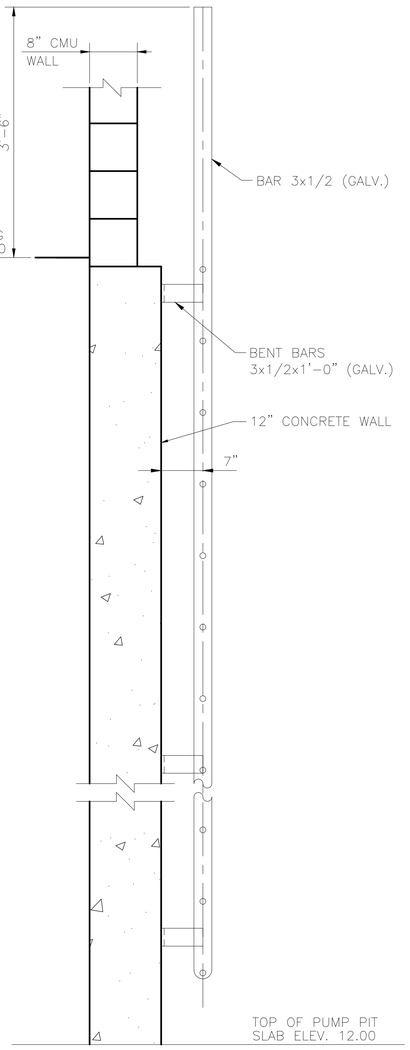
STAIR SECTION AND DETAILS

DR. LN	
TRC. ————	GENERAL SUPERINTENDENT
CK. MS	
AP. MS	DWG. No. 12039–W–63
SCALE: AS NOTED	
DATE: JANUARY 2012	SET NO. SHEET NO. 21

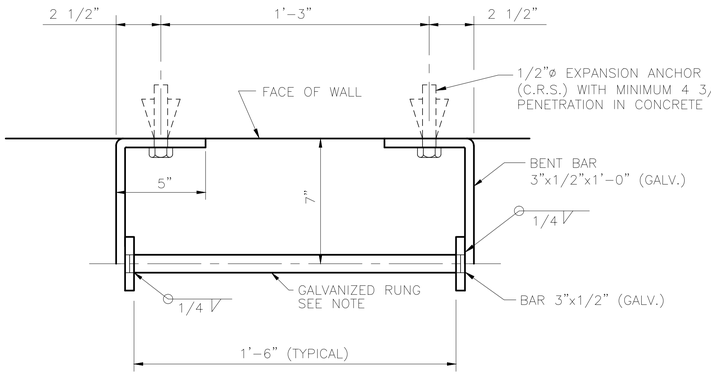
PRINTED May 31, 2013 – 9:15am FILENAME – J:\6005.1–GOSHEP–2013\Contract 3668 – Victoria SPS\SHT 21_VIC_STAIR_SEC_DET.dwg



ELEVATION
SCALE: 1" = 1'-0"

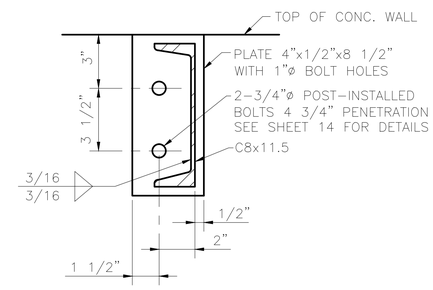


A 2222 SECTION
SCALE: 1"=1'-0"



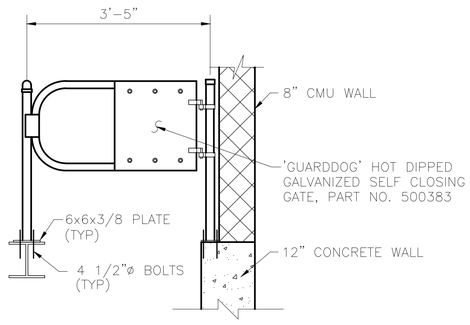
B 2222 SECTION
SCALE: 3"=1'-0"

0 3" 6" 9" 12"
SCALE: 3" = 1'

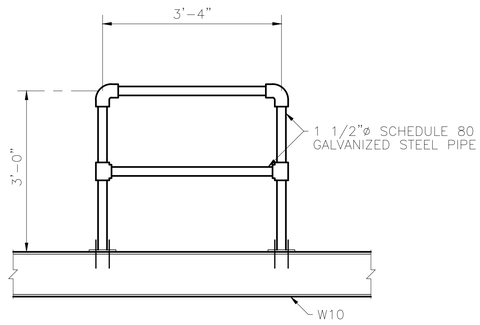


D 2222 SECTION
SCALE: 3" = 1'-0"

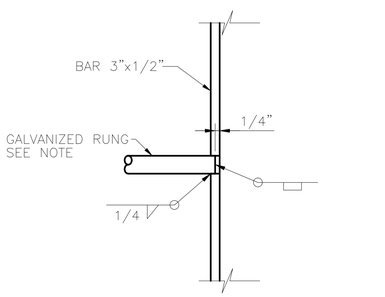
0 3" 6" 9" 12"
SCALE: 3" = 1'



C 2222 VIEW
SCALE: 3/4"=1'-0"

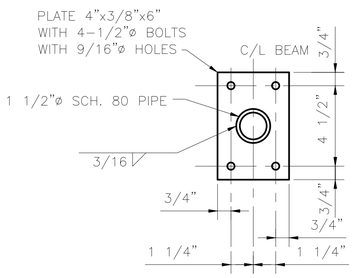


E 2222 VIEW
SCALE: 3/4"=1'-0"



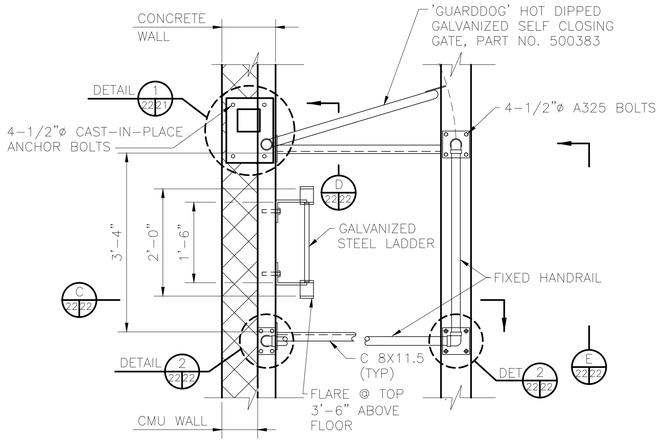
1 2222 DETAIL
SCALE: 3" = 1'-0"

0 3" 6" 9" 12"
SCALE: 3" = 1'



2 2222 DETAIL
SCALE: 3" = 1'-0"

0 3" 6" 9" 12"
SCALE: 3" = 1'



PLAN @ ACCESS LADDER
SCALE: 3/4"=1'-0"

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
9/24/2013

NOTES:

1.) STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM A36.

2.) STEPS SHALL BE SLIP RESISTANT.

3.) RUNG SHALL HAVE NON SLIP SURFACE WITH 1" WIDE STRIATED TOP, 1 1/4" DEEP AND SEMICIRCULAR BOTTOM.

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

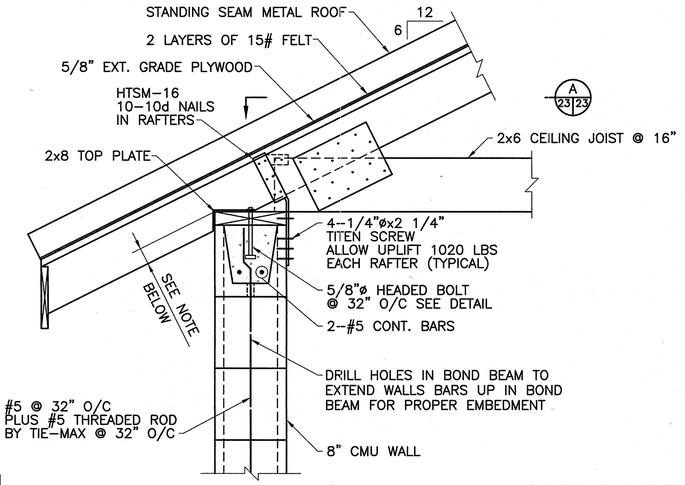
SEWERAGE AND WATER BOARD
OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

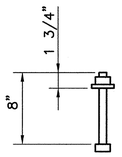
LADDER DETAILS

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. LN	
TRC. --	
CK. MS/AR	GENERAL SUPERINTENDENT
AP. MS	DWG. No. 12039-W-63
SCALE: AS SHOWN	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 22

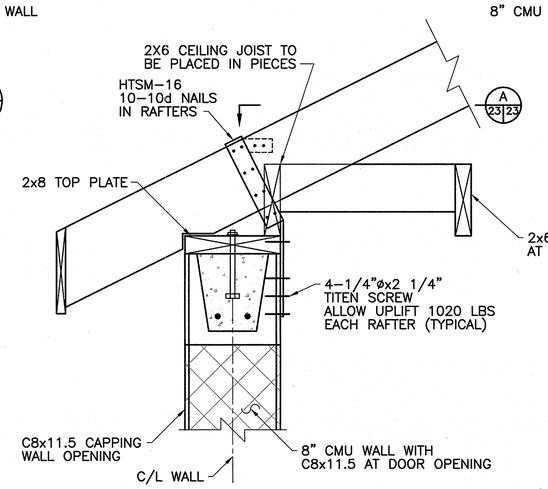


DETAIL
SCALE: 1 1/2"=1'-0" (1 / 23 23)

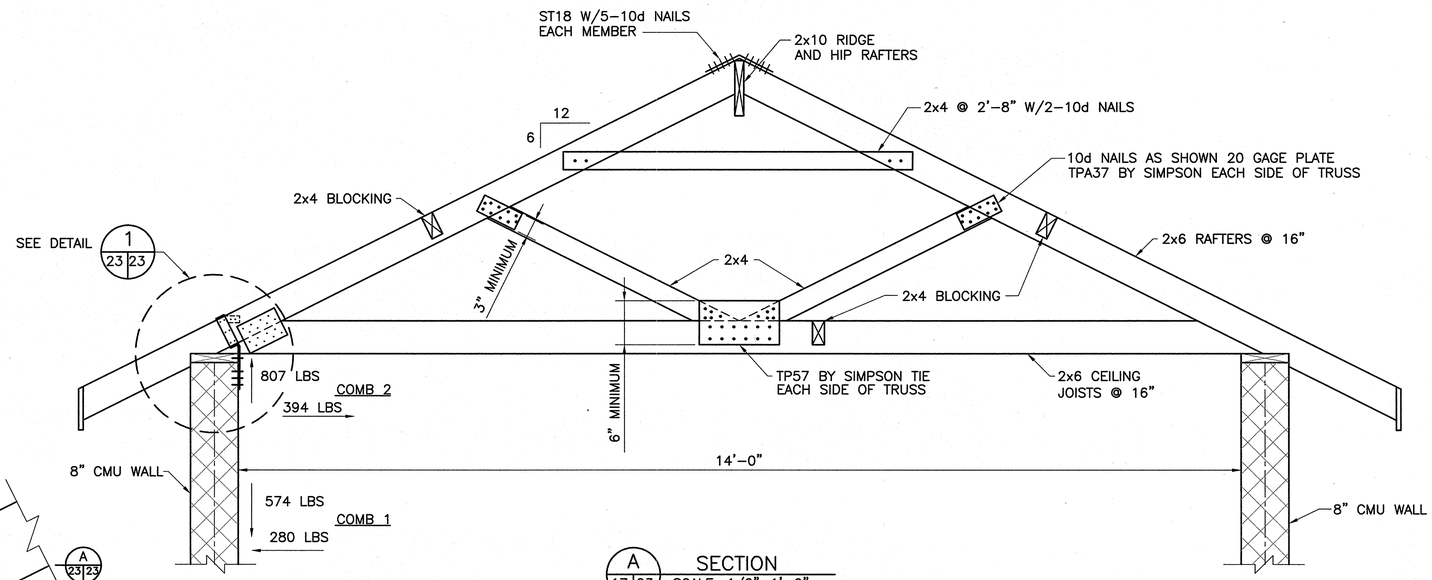


BOLT DETAIL
SCALE: 1 1/2"=1'-0"

NOTE:
THE DEPTH OF THE NOTCH SHALL BE
LIMITED TO 1/3 OF DEPTH OF THE MEMBER

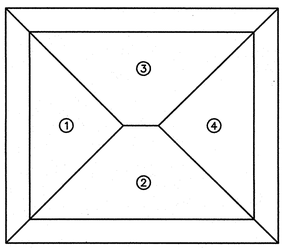


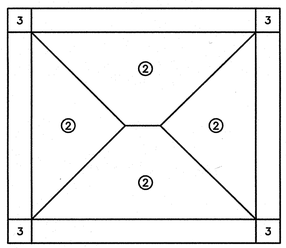
C SECTION
17 23 SCALE: 1 1/2"=1'-0"



COMB 1 DEAD LOAD PLUS WIND
COMB 2 0.6 DEAD LOAD MINUS WIND

A SECTION
17 23 SCALE: 1/2"=1'-0"
0 1' 2' 4'





MAIN WIND RESISTING FRAME

KEY PLAN
ROOF WIND PRESSURES
(USING ANALYTICAL METHOD)

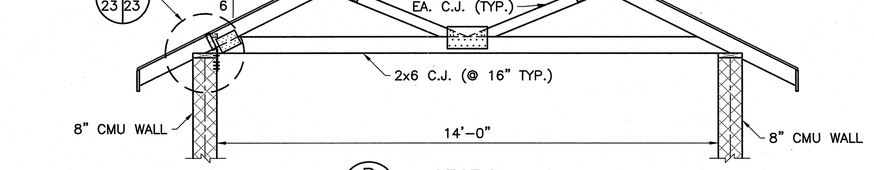
WIND DIRECTION	ZONE 1	ZONE 2	ZONE 3	ZONE 4	OVERHANG
A	-17.91	-38.36	-22.94	-17.91	-48.00
	10.00	10.00	10.00	10.00	--
B	-17.91	-20.42	-38.04	-17.91	-48.00
	10.00	10.00	10.00	10.00	--

COMPONENTS AND CLADDINGS

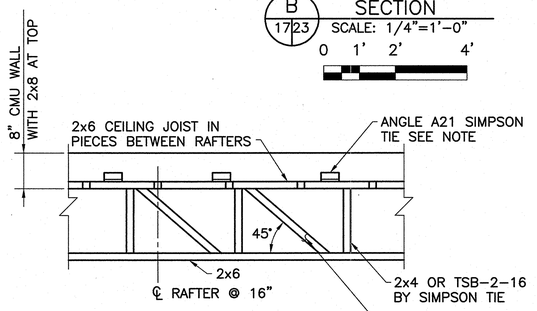
WIND DIRECTION	ZONE 2	ZONE 3
A AND B	-70.52	-79.40
	14.22	14.22

NOTE:
1.) AREA UNDER ZONE 1 WAS SMALL SO IT WAS ASSUMED TO BE SAME AS ZONE 2.

1.) NEGATIVE PRESSURE INDICATES UPLIFT AND POSITIVE PRESSURE INDICATES DOWNWARD PRESSURE. MINIMUM PRESSURE IS 10 PSF.



B SECTION
17 23 SCALE: 1/4"=1'-0"
0 1' 2' 4'



NOTE:
ANGLE A21 CONNECTOR CAN BE
PLACED WITHIN 2" FROM
CENTERLINE ON EITHER SIDE

SECTION
SCALE: 3/4"=1'-0" (A / 23 23)

NOTE:
THE NAIL REFERENCE ABOVE ARE TO
COMMOM NAILS. IF SINKER NAILS ARE USED,
FOLLOWING CONVERSION SHALL BE USED.

6d COMMON - 8d SINKER
8d COMMON - 12d SINKER
10d COMMON - 16d SINKER
16d COMMON - 20d SINKER

ALL THE HARDWARE SPECIFIED ARE FROM
SIMPSON STRONG TIE CATALOGS. THE CONTRACTOR
MAY USE EQUAL OR STRONGER UPON APPROVAL
FROM S&WB.

NOTE:
ALL RAFTERS AND CEILING JOISTS REQUIRE BLOCKING AT MAXIMUM SPACING OF 10'-0". BLOCKING SHALL BE A MINIMUM 2x4 TIMBER NAILED USING 2-10d NAILS.

TRUSS PLATES SHALL BE OF GALVANIZED SHEET STEEL 20 GAGE THICK CONFORMING TO ASTM A446, GRADE A WITH GALVANIZED COATING PER ASTM A-525, LOADING DESIGNATION G60 OR APPROVED EQUAL. THE PLATES SHALL BE SUPPLIED WITH HOLES.

ALL TIMBER SHALL BE PRECISELY CUT TO HAVE FULL BEARING TO CONNECTING MEMBER.

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD
OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

ROOF SECTION AND DETAILS

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
6/15/13

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
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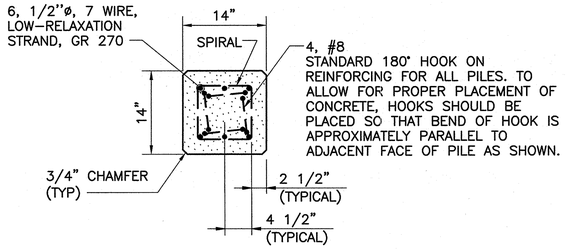
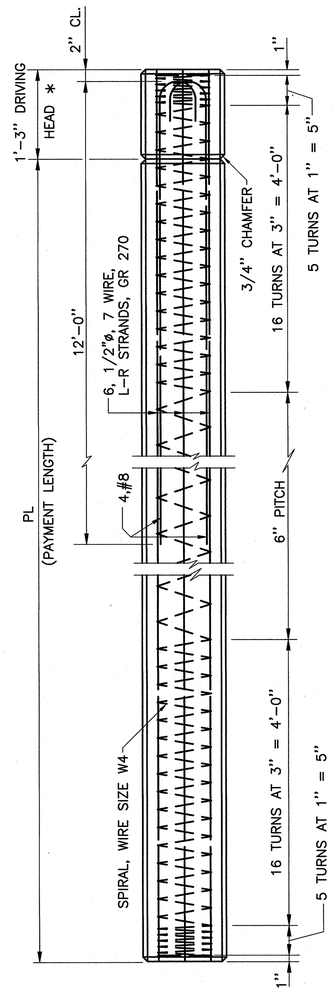
Metairie, LA 70002
(504) 836-2155

DR. MZ	
TRC. --	
CK. MS/AR	GENERAL SUPERINTENDENT
AP. MS	DWG. No. 12039-W-63
SCALE: AS SHOWN	SET NO. / SHEET NO. 23
DATE: JANUARY 2012	



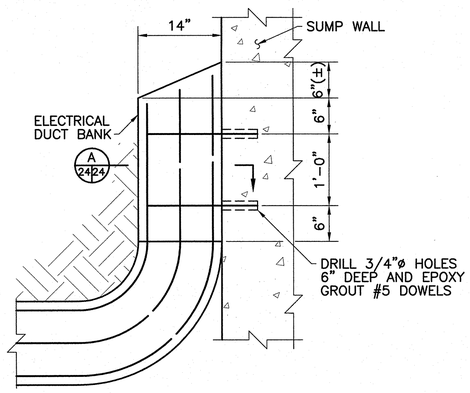


* DRIVING HEAD CONCRETE, STRANDS AND SPIRAL TIES TO BE REMOVED AFTER DRIVING TO EXPOSE HOOKS. (NO PAYMENT)

NOTE:
GRIND PRESTRESSED STRANDS FLUSH WITH PILE HEAD AND PILE TIP.

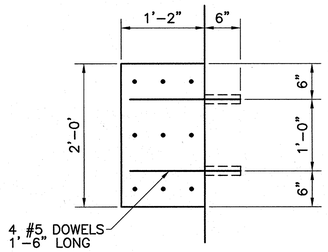
14" X 14" PRESTRESSED PRECAST CONCRETE PILE

SCALE: N.T.S.



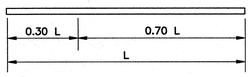
CONCRETE ELECTRICAL DUCT BANK

SCALE: 1" = 1'-0"

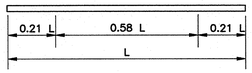


A 2424 SECTION

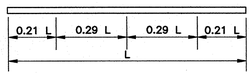
SCALE: 1"=1'-0"



1 POINT PICKUP (L < 58') 14" X 14" PILE
1 POINT PICKUP (L < 60') 16" X 16" PILE



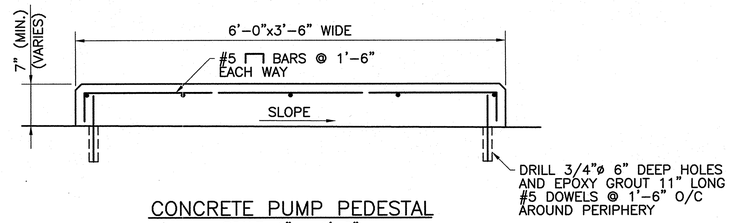
2 POINT PICKUP (L < 83') 14" X 14" PILE
2 POINT PICKUP (L < 86') 16" X 16" PILE



3 POINT PICKUP (L ≤ 130') 14" X 14" PILE
3 POINT PICKUP (L ≤ 136') 16" X 16" PILE

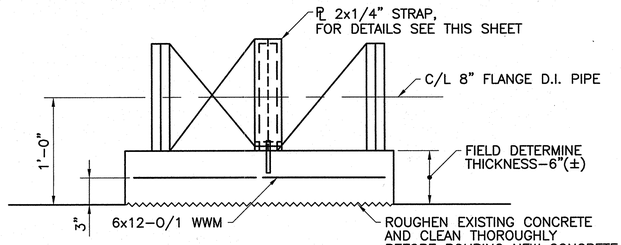
NOTES

1. PICKUP POINTS TO BE PLAINLY MARKED ON PILES.
2. PICKUP POINTS SHOWN ARE BASED ON 5000 PSI CONCRETE STRENGTH.
3. 4–#8 HOOKED BARS REQUIRED ONLY FOR TENSION ANCHOR PILES.
4. PILE LENGTHS SHOWN ARE FINAL.
5. A FACTOR OF SAFETY OF 3.0 IS USED TO DETERMINE PILE LENGTH.
6. CONTRACTOR SHALL PROBE AT PILE LOCATIONS TO ENSURE THERE ARE NO SUBSUFACE OBSTACLES.
7. PILE DRIVING STRESSES SHALL NOT EXCEED FOLLOWING:
   COMPRESSION: 0.85 x CONCRETE STRENGTH – EFFECTIVE PRESTRESS
   TENSION: EFFECTIVE PRESTRESS
   EFFECTIVE PRESTRESS CAN BE TAKEN EQUAL TO 800 PSI



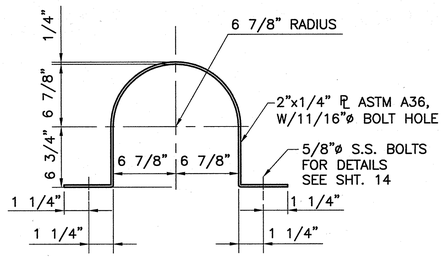
CONCRETE PUMP PEDESTAL

SCALE: 1" = 1'-0"



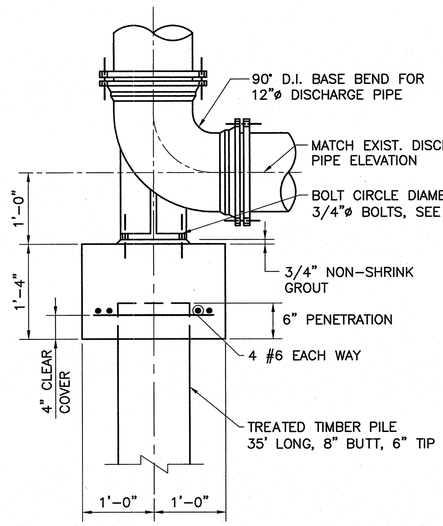
CONCRETE VALVE PEDESTAL

SCALE: 1" = 1'-0"



STRAP DETAIL

SCALE: 1 1/2" = 1'-0"



DISCHARGE PIPE SUPPORT

SCALE: 1" = 1'-0"

NOTE:

1.) 3/4"ø BOLTS FOR THRUST BLOCK SHALL BE CAST–IN–PLACE STAINLESS STEEL BOLTS PER ASTM F–1554, 55 ksi AS DETAILED ON SHEET 14.

2.) NEOPRENE WASHERS FOR STAINLESS STEEL BOLTS SHALL BE USED TO SEPARATE TWO METALS TO STOP GALVANIC ACTION.

DESCRIPTION	PILE TYPE AND SIZE	PILE TIP ELEVATION	PAYMENT LENGTH IN FEET
PUMP PIT	PRESTRESSED PRECAST CONCRETE PILE 14"x14"	(–)29.75	40.00'
PLATFORM STAIR AND DISCHARGE PIPE SUPPORT	TIMBER TREATED PILE 8"ø BUTT 6"ø TIP	(–)14.17	35.00'

STATE OF LOUISIANA
M. B. SHUKLA
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REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
6/5/13

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DR. M.Z.
TRC. ----
CK. MS
AP. MS
SCALE: AS NOTED
DATE: JANUARY 2012

GENERAL SUPERINTENDENT

DWG. No. 12039–W–63

SET NO. SHEET NO. 24

STRUCTURAL

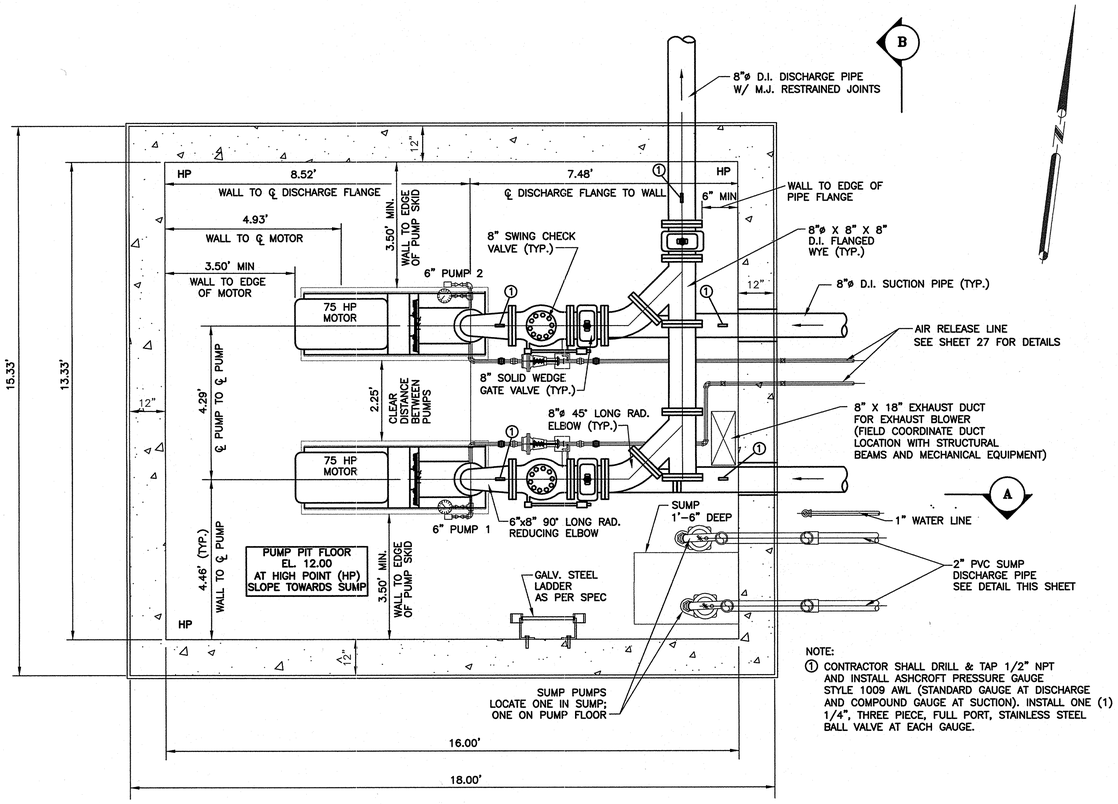
REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

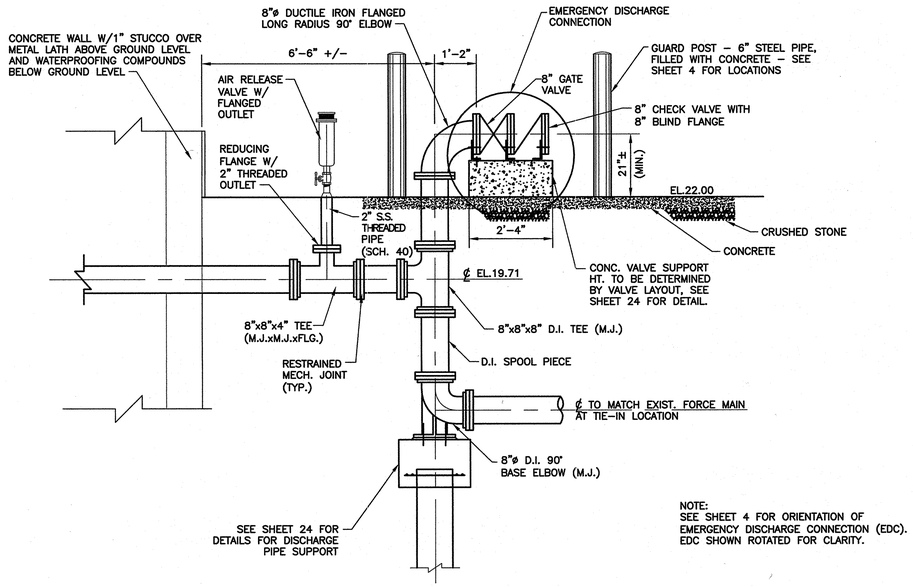
PPC PILE AND MISCELLANEOUS DETAILS

PRINTED May 31, 2013 – 9:18am FILENAME – J:\6005.1–GOSHEP–2013\Contract 3668 – Victoria SPS\SHT 24_VIC_PILE DET.dwg



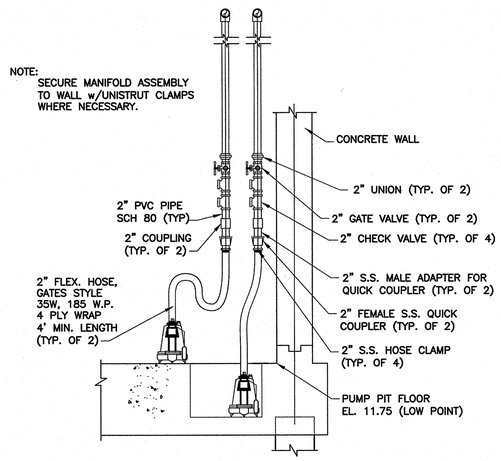
NOTE:
① CONTRACTOR SHALL DRILL & TAP 1/2" NPT AND INSTALL ASHCROFT PRESSURE GAUGE STYLE 1009 AWL (STANDARD GAUGE AT DISCHARGE AND COMPOUND GAUGE AT SUCTION). INSTALL ONE (1) 1/4", THREE PIECE, FULL PORT, STAINLESS STEEL BALL VALVE AT EACH GAUGE.

MECHANICAL EQUIPMENT LAYOUT PLAN
SCALE: 1/2" = 1'-0"

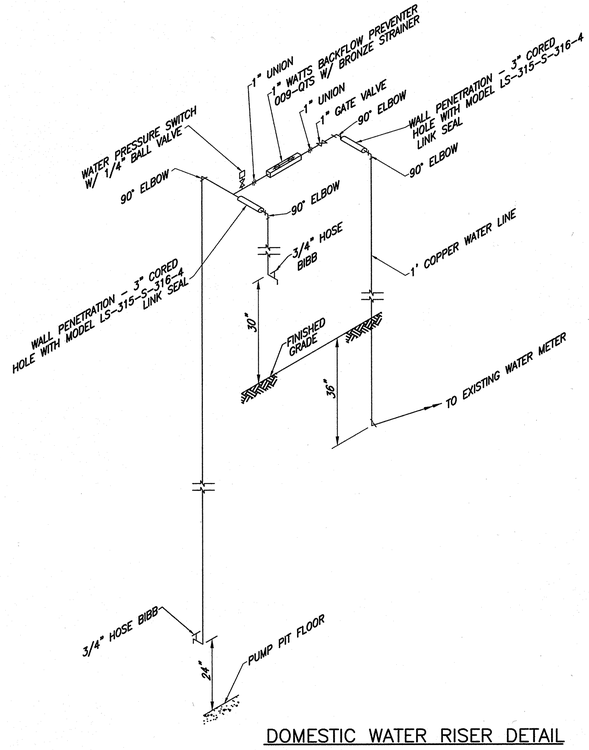


NOTE:
SEE SHEET 4 FOR ORIENTATION OF EMERGENCY DISCHARGE CONNECTION (EDC). EDC SHOWN ROTATED FOR CLARITY.

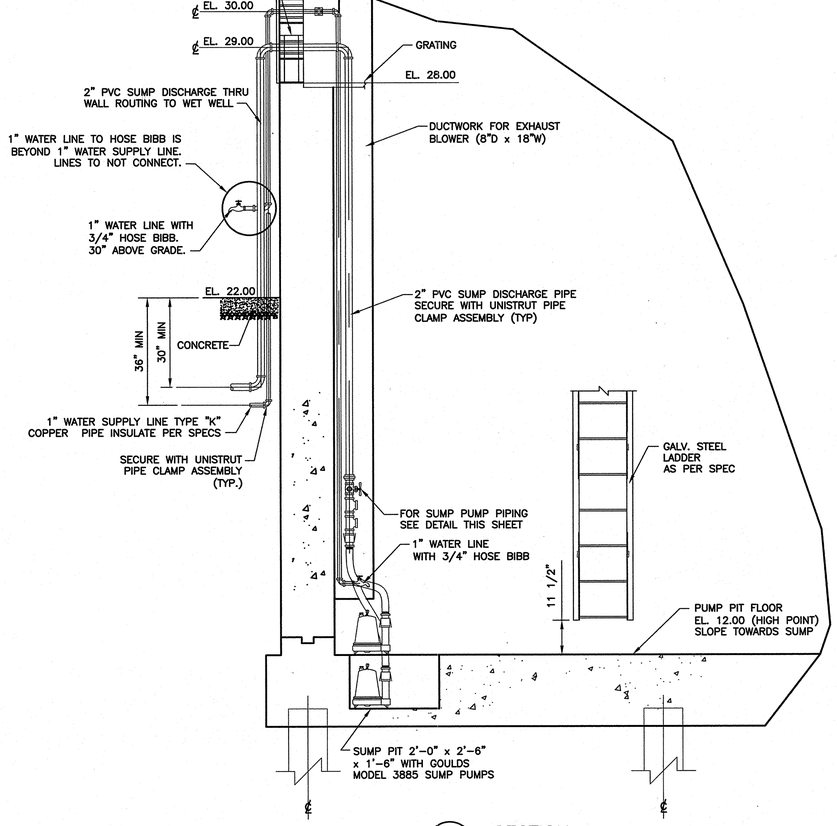
B DISCHARGE PIPE
SCALE: 1/2" = 1'-0"



SUMP PUMP PIPING DETAIL
SCALE: 1/2" = 1'-0"



DOMESTIC WATER RISER DETAIL
N.T.S.



A SECTION
SCALE: 1/2" = 1'-0"

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
6/5/13

MECHANICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

MECHANICAL EQUIPMENT LAYOUT PLAN

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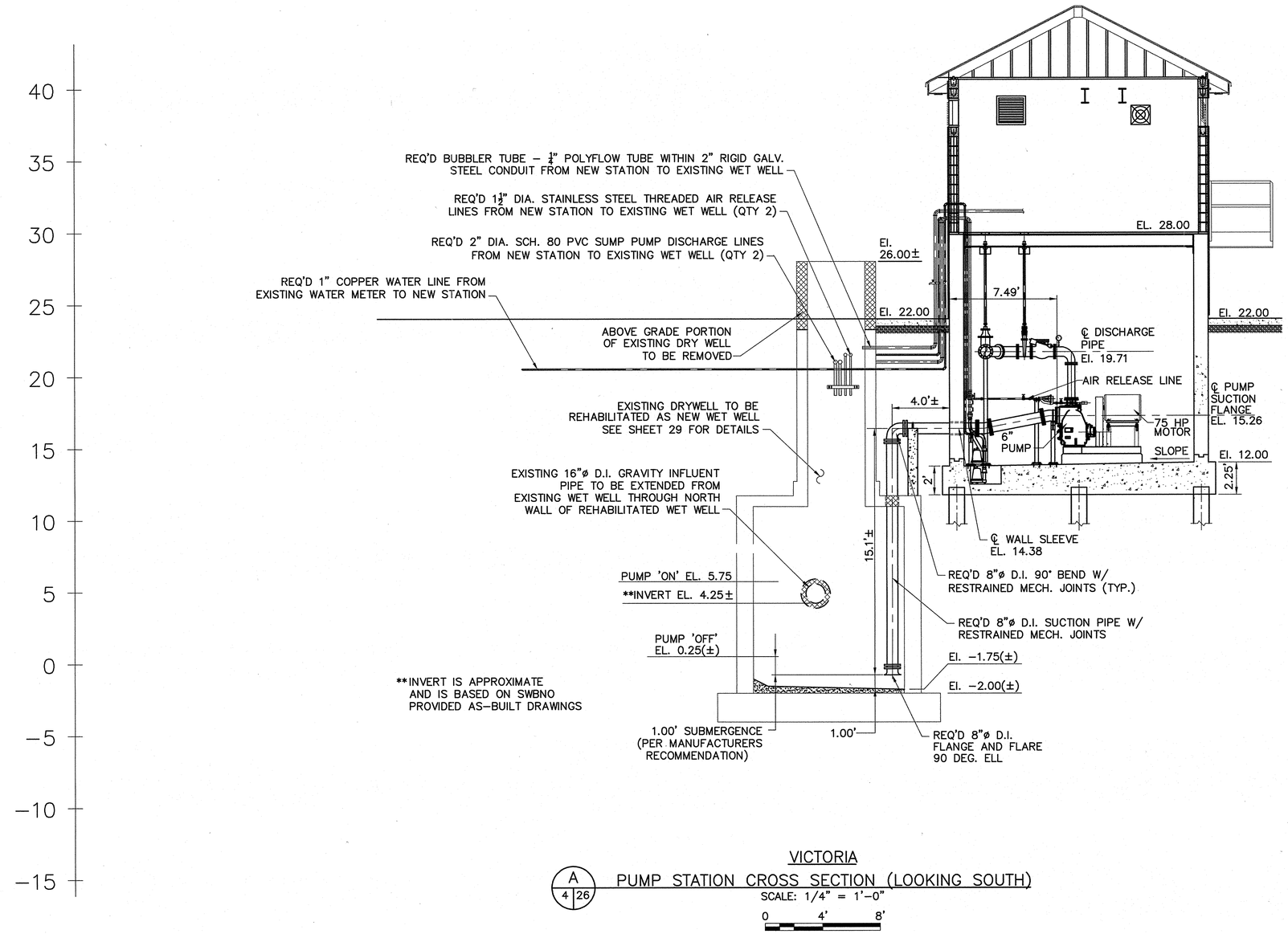
AP. JH	DWG. No. 12039-W-63
SCALE: AS SHOWN	
DATE: JANUARY 2012	SET NO. / SHEET NO. 25



**INVERT IS APPROXIMATE AND IS BASED ON SWBNO PROVIDED AS–BUILT DRAWINGS

VICTORIA
PUMP STATION CROSS SECTION (LOOKING SOUTH)

A / 4 | 26

SCALE: 1/4" = 1'–0"

0 4' 8'

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
REGISTERED PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
6/5/13

MECHANICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

PIPING CROSS SECTION THROUGH STATION AND WET WELL

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AP. JH	DWG. No. 12039–W–63
SCALE: AS SHOWN	
DATE: JANUARY 2012	SET NO. SHEET NO. 26

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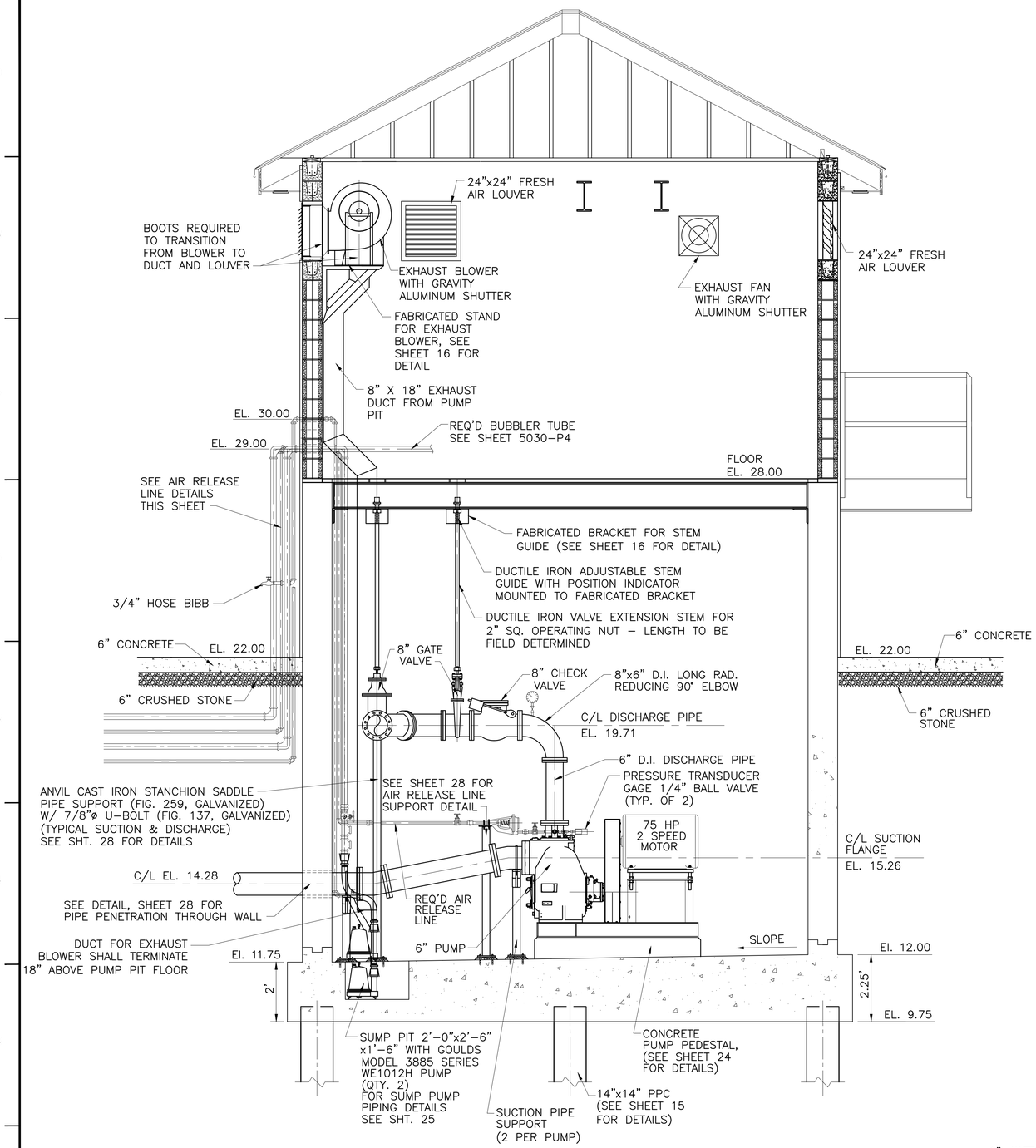
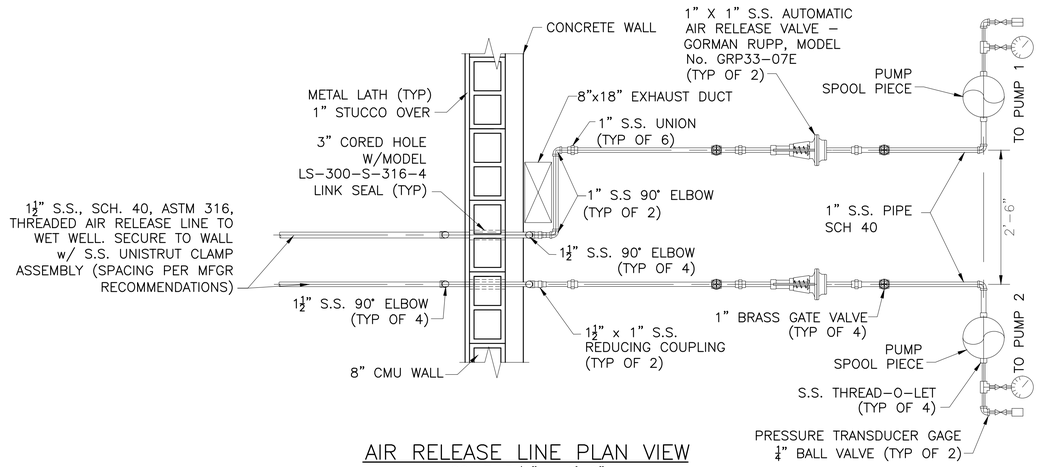
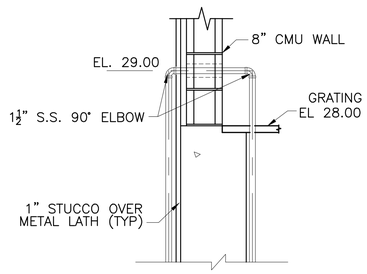


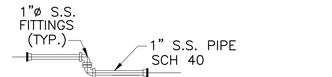
B 4|27

VICTORIA
LONGITUDINAL SECTION OF BUILDING (LOOKING SOUTH)
SCALE: 1/2" = 1'-0"

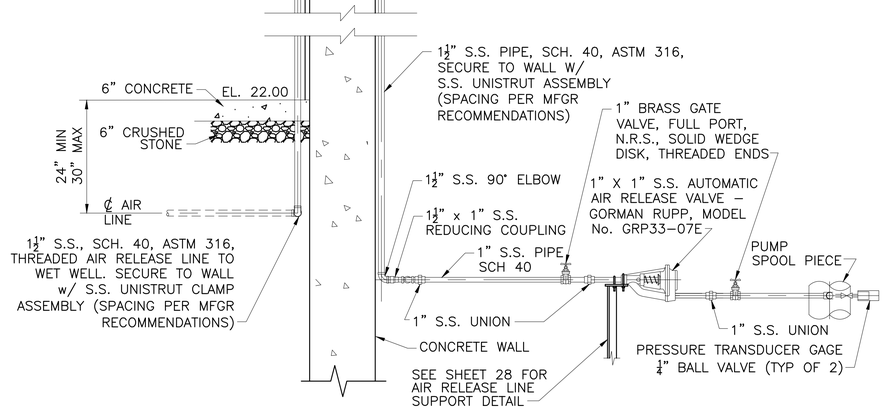


AIR RELEASE LINE PLAN VIEW
SCALE: 3/4" = 1'-0"

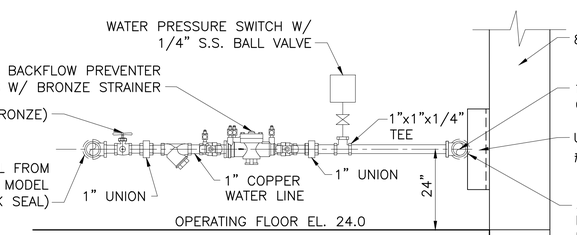




MAINTENANCE PIPE ASSEMBLY
NOTE:
CONTRACTOR TO PROVIDE ONE (1) 1"ø S.S. PIPE ASSEMBLY WITH S.S. UNION ENDS. ASSEMBLY SHALL BE OF CORRECT LENGTH AND OFFSET TO REPLACE THE AIR RELEASE VALVE DURING MAINTENANCE.



AIR RELEASE LINE ELEVATION
SCALE: 3/4" = 1'-0"



POTABLE WATER LINE INSTALLATION DETAIL (LOOKING EAST)
N.T.S.

STATE OF LOUISIANA
John W. Hollstreve, Jr.
REG. No. 16383
REGISTERED
PROFESSIONAL
CIVIL ENGINEERING
9/24/2013

MECHANICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

LONGITUDINAL SECTION

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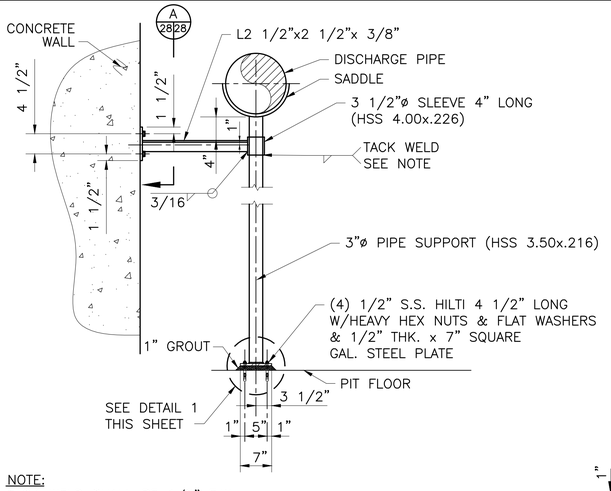
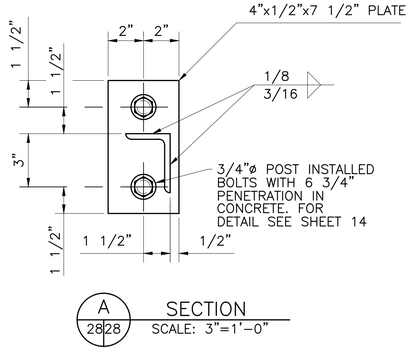
TRC. --	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. JH	DWG. No. 12039-W-63
SCALE: AS SHOWN	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 27

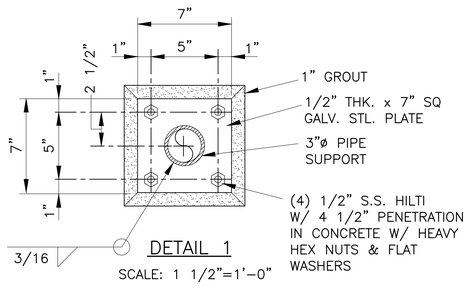


NOTE:
TACK WELD SHALL BE 1/8" F.W., 3/8" LONG, TWO LOCATIONS @ TOP AND TWO LOCATIONS @ BOTTOM, DIAGONALLY OPPOSITE

ELEVATION
SCALE: 1"=1'-0"



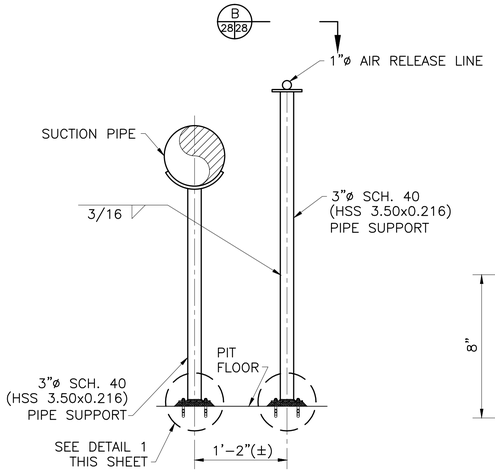
A 28|28 SECTION
SCALE: 3"=1'-0"



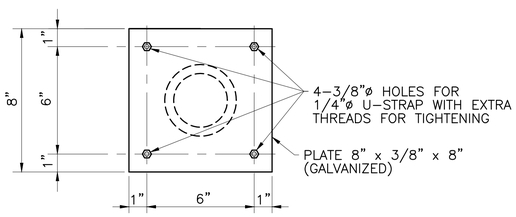
DETAIL 1
SCALE: 1 1/2"=1'-0"

DETAILS FOR DISCHARGE PIPE SUPPORT WITH LATERAL BRACE

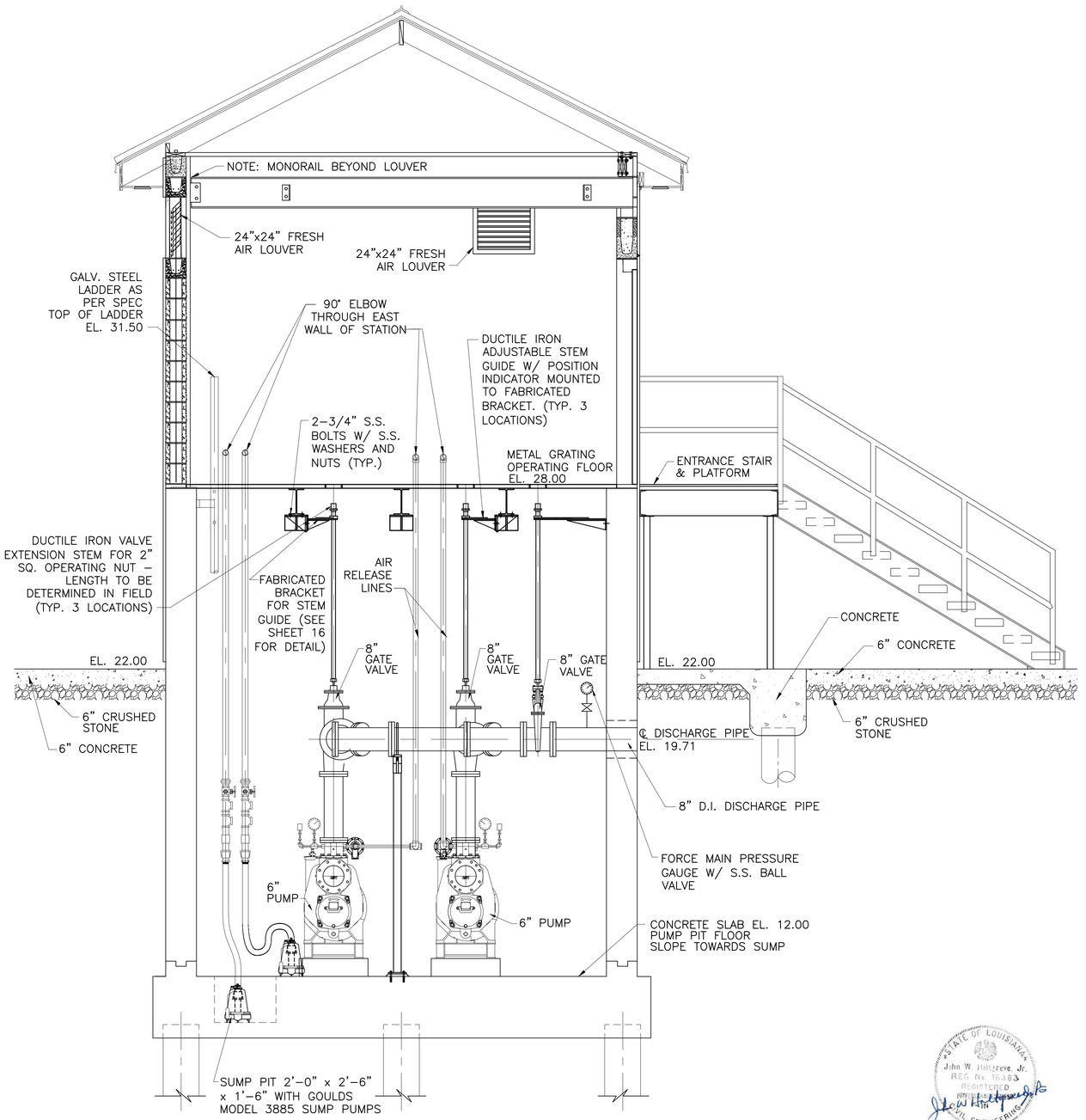
SCALE: AS NOTED



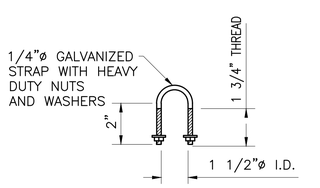
ELEVATION
SCALE: 1"=1'-0"



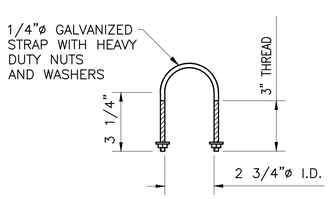
B 28|28 SECTION
SCALE: 3"=1'-0"



C 4|28 CROSS-SECTION OF BUILDING (LOOKING WEST)
SCALE: 1/2" = 1'-0"



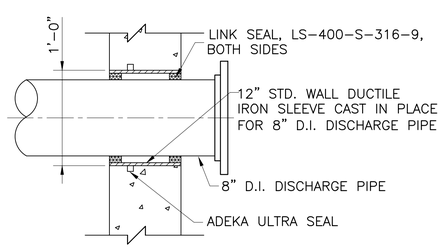
1/4"ø GALVANIZED STRAP (FOR 1"ø AIR RELEASE LINE)
SCALE: 3"=1'-0"



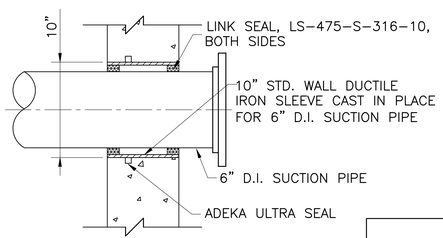
1/4"ø GALVANIZED STRAP (FOR AIR RELEASE VALVE)
SCALE: 3"=1'-0"

DETAILS FOR SUCTION PIPE AND AIR RELEASE LINE SUPPORT

SCALE: AS NOTED



DISCHARGE PIPE DETAIL FOR WALL PENETRATION
N.T.S.



SUCTION PIPE DETAIL FOR WALL PENETRATION
N.T.S.

STATE OF LOUISIANA
John W. Hillstrom, Jr.
REG. No. 16385
REGISTERED
PROFESSIONAL
CIVIL ENGINEERING
9/24/2013

MECHANICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

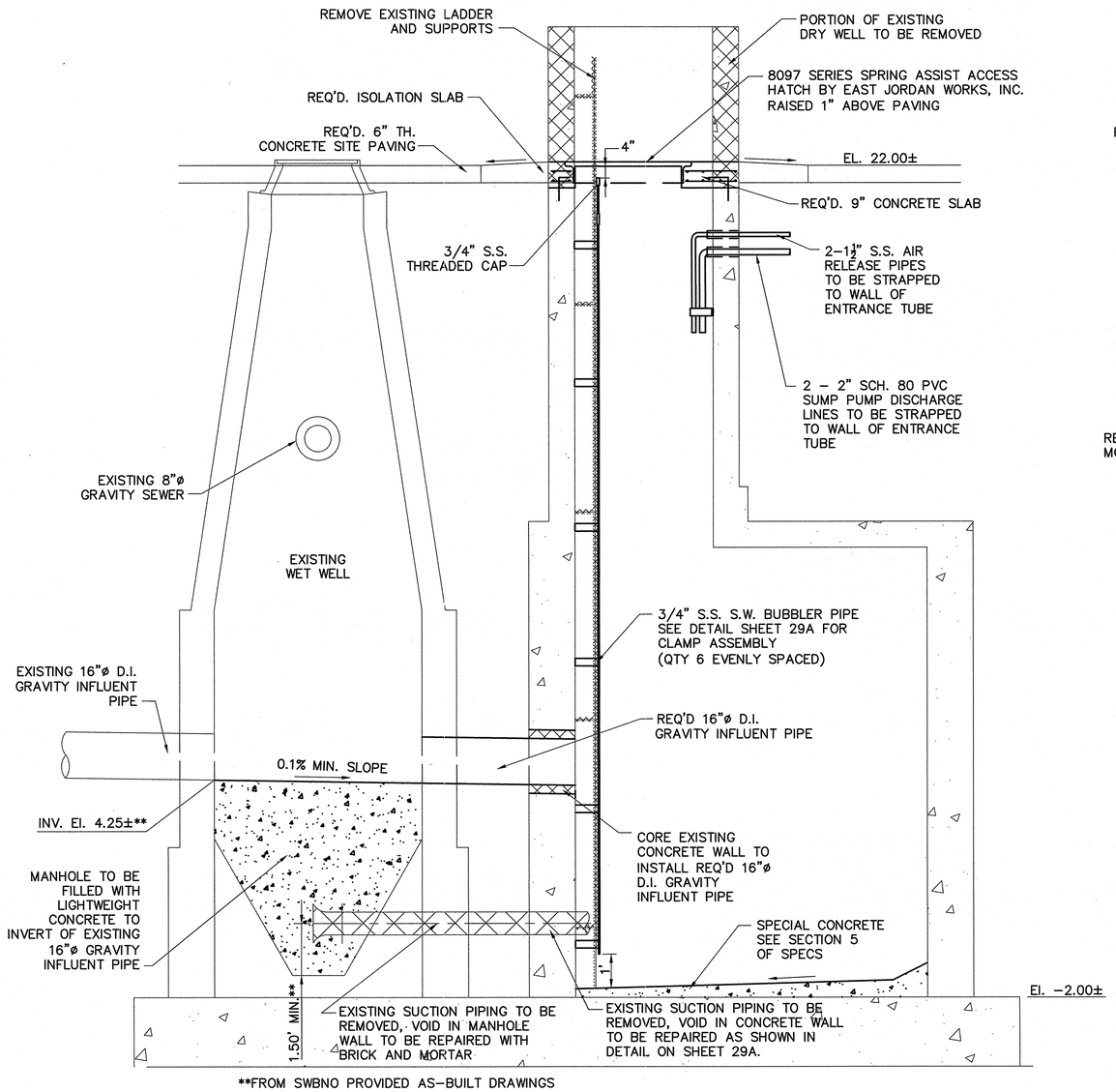
CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

CROSS SECTION THROUGH STATION & MISCELLANEOUS DETAILS

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

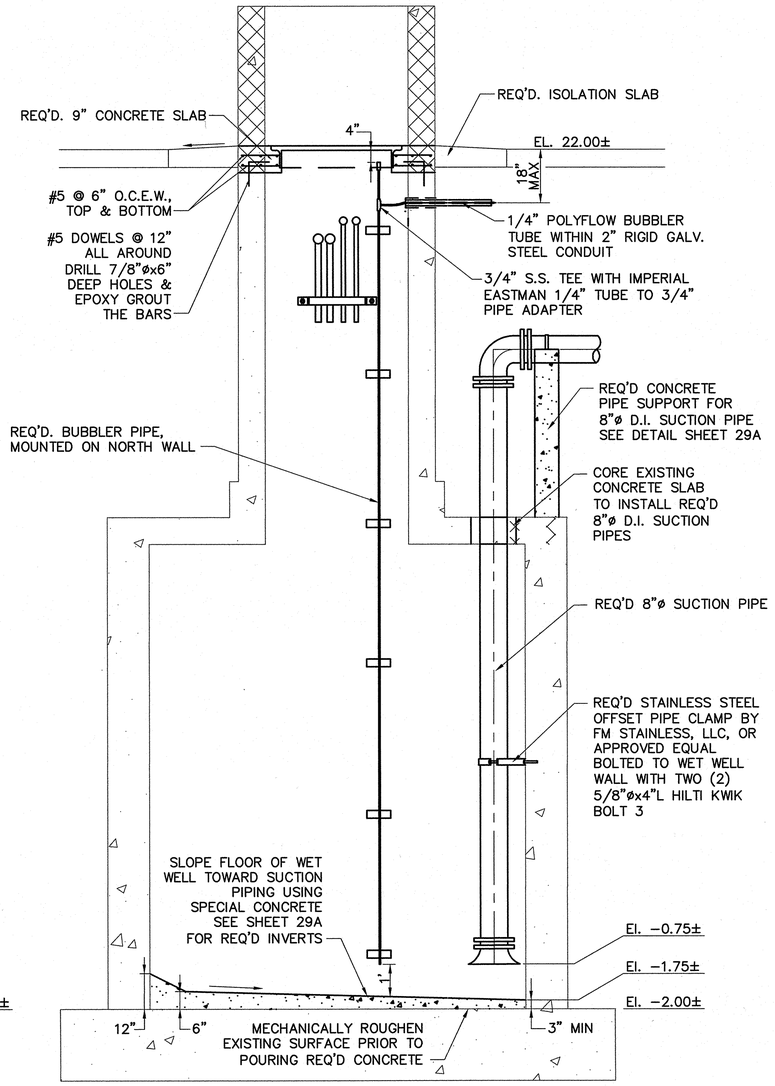
DR. TH/BD	
TRC. --	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. JH	DWG. No. 12039-W-63
SCALE: AS SHOWN	
DATE: SEPTEMBER 2013	SET NO. / SHEET NO. 28

PRINTED Sep 26, 2013 - 11:05am FILENAME - J:\6005.1-(CONFORMED DRAWINGS)\Contract 3668 - Victoria SPS\SHT 28_VIC_XSEC THRU STA & DET.dwg



**FROM SWBNO PROVIDED AS–BUILT DRAWINGS

EXISTING WET WELL
(LOOKING EAST)
SCALE: 1/2" = 1'–0"
0 2' 4'



REHABILITATED DRY WELL FOR WET WELL SERVICE
(LOOKING EAST)
SCALE: 1/2" = 1'–0"
0 2' 4'

REHABILITATED DRY WELL FOR WET WELL SERVICE
(LOOKING SOUTH)
SCALE: 1/2" = 1'–0"
0 2' 4'

SEQUENCE OF CONSTRUCTION

1. HIGH–PRESSURE WATER BLAST INTERIOR WET WELL SURFACES TO REMOVE ALL LOOSE, CHEMICALLY ATTACKED CONCRETE, DIRT DUST, LAITANCE, EFFLORESCENCE, BIOLOGICAL RESIDUE, EXISTING PAINT OR COATINGS, CURING COMPOUNDS, OR ANY OTHER CONTAMINANTS THAT MIGHT AFFECT THE BOND. CHEMICALLY CLEAN WET WELL TO REMOVE ALL OILS, GREASES, AND CONTAMINANTS. NEUTRALIZED AND WASH DOWN CHEMICAL CLEANING AGENT RESIDUES COMPLETELY. THE FINAL PRODUCT SHALL BE CLEANED, EXPOSED AND VIRGIN CONCRETE AGGREGATE. PROPERLY PREPARED CONCRETE WILL HAVE AN OPEN TEXTURE SIMILAR TO FINE–GRIT SANDPAPER.
2. THE CONTRACTOR SHALL CLEAN INTERIOR SURFACES OF EXISTING GRAVITY SEWER(S) TO EXISTING UPSTREAM INFLUENT SEWER MANHOLE. THE CONTRACTOR SHALL ISOLATE THE UPSTREAM MANHOLE PRIOR TO CLEANING GRAVITY SEWER AND SHALL PERFORM CLEANING OPERATIONS AT LOW–FLOW TIMES (LATE NIGHT/EARLY MORNING).
3. ABRASIVE BLAST ALL EXISTING METAL STRUCTURES WITHIN THE WET WELL. APPLY FOUR (4) MILS OF RUST INHIBITING PRIMER AND TEN (10) MILS OF EPOXY COATING TO METAL PIPING AND OTHER METAL STRUCTURES INSIDE WET WELL.
4. INSPECT WET WELL AND SEWER MANHOLE FOR LEAKS AND WHERE REQUIRED, INJECT HYDROACTIVE GROUT DESIGNED FOR THE FIELD SEALING OF GROUND WATER, TO SEAL AND PREVENT FURTHER WATER INFILTRATION IN STRUCTURE. CRACKS SHALL BE REPAIRED WITH A URETHANE BASED CHEMICAL SEALANT. REPAIRS TO EXPOSED REBAR SHALL BE PERFORMED UTILIZING NON–SHRINK GROUT (WET WELL).
5. APPLY A GUNITE FAST–SETTING CEMENTITIOUS WATERPROOFING MATERIAL TO ALL EXPOSED CONCRETE/BRICK SURFACES, INCLUDING WALLS, ROOF, INVERT AND PIPE PENETRATIONS THROUGH WALLS. APPLY CEMENTITIOUS WATERPROOFING MATERIAL TO A MINIMUM THICKNESS OF 1/2". CEMENTITIOUS WATERPROOFING MATERIAL SHALL BE DESIGNED FOR USE IN SANITARY SEWAGE APPLICATIONS.
6. APPLY PROTECTIVE LINING INTERIOR SURFACES OF THE WET WELL AND THE REHABILITATED SEWER MANHOLE. PROTECTIVE LINING SHALL BE SEWERGARD ROTARY SPRAY NO. 210RS, AS MANUFACTURED BY SAUEREISEN, OR BOARD ENGINEER APPROVED EQUAL, AND SHALL HAVE A MINIMUM THICKNESS OF 125 MILS. PROTECTIVE LINING SHALL IN BE IN ACCORDANCE WITH SECTION 14 OF THE SPECIFICATIONS.
7. REHABILITATED SEWER MANHOLE ONLY – PERFORM A HIGH–VOLTAGE SPARK TEST TO PROTECTIVE LINING AND REPAIR ALL DETECTED PINHOLES.

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
REGISTERED PROFESSIONAL ENGINEER
6/5/13

MECHANICAL

REV.	DATE	DESCRIPTION	BY

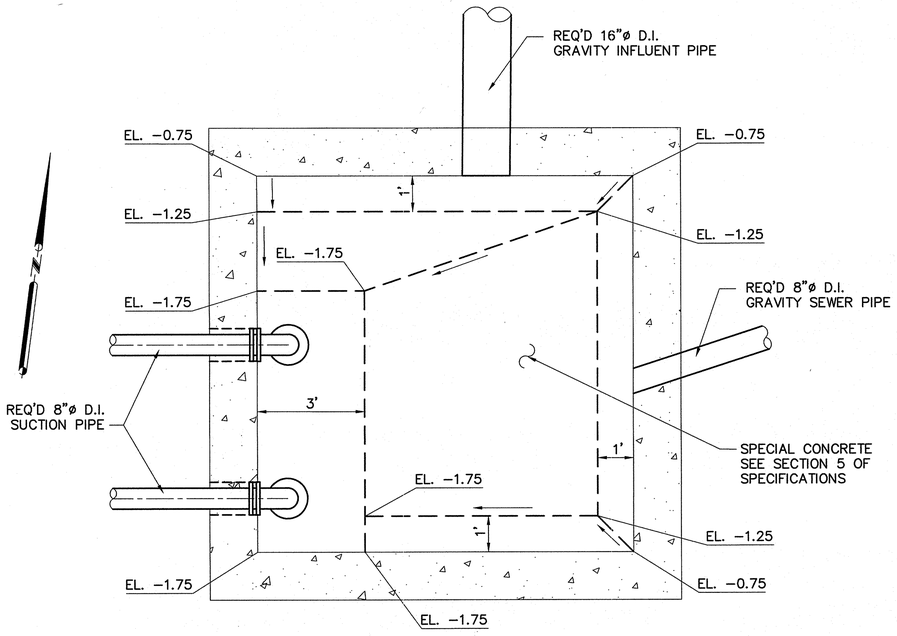
SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

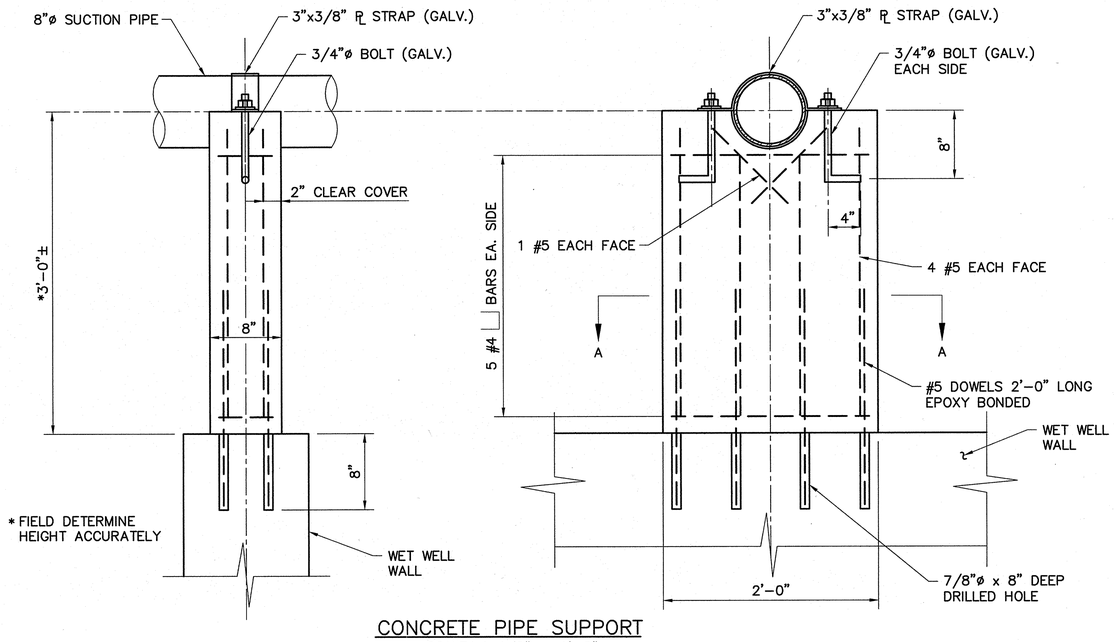
REHABILITATION OF DRY WELL FOR WET WELL SERVICE – 1

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836–2155

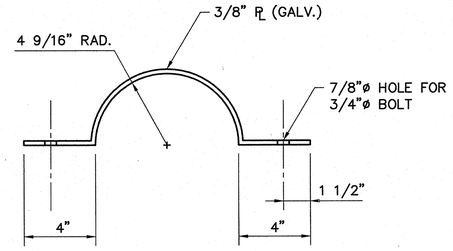
DR. TH/BD	
TRC. — —	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. JH	DWG. No. 12039–W–63
SCALE: AS SHOWN	
DATE: JANUARY 2012	SET NO. SHEET NO. 29



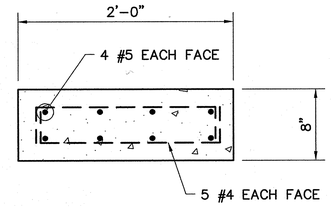
PLAN OF REHABILITATED WET WELL
SCALE: 1 1/2" = 1'-0"



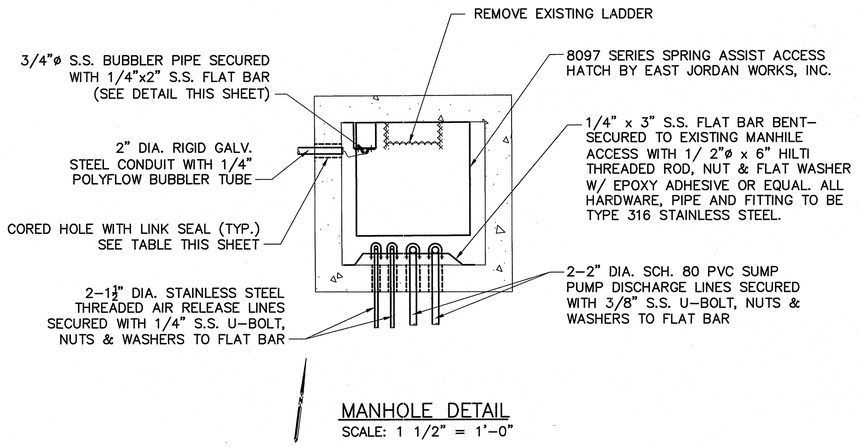
CONCRETE PIPE SUPPORT
SCALE: 1 1/2" = 1'-0"



PIPE STRAP DETAIL
SCALE: 3" = 1'-0"



SECTION A-A
SCALE: 1 1/2" = 1'-0"

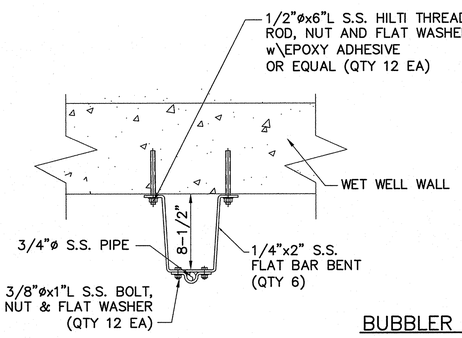


MANHOLE DETAIL
SCALE: 1 1/2" = 1'-0"

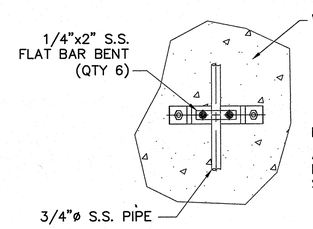
REQ'D LINK SEALS FOR WET WELL PENETRATIONS

PIPE/CONDUIT	CORED HOLE ø	LINK SEAL MODEL NO.
SUMP PUMP LINE 2" PVC	4"	LS-300-S-316-6
AIR RELEASE LINE 1" S.S.	3"	LS-300-S-316-4
BUBBLER CONDUIT 2" RIGID GALV. STEEL	4"	LS-300-S-316-6
GRAVITY SEWER 8" PVC	12"	LS-475-S-316-12
SUCTION PIPE 8" D.I.	12"	LS-400-S-316-9
INFLUENT SEWER 16" D.I.	20"	LS-360-S-316-27*

* AS AN ALTERNATE TO THE MODULAR SEAL FOR THIS PIPE, CONTRACTOR MAY CHOOSE TO USE NON-SHRINK CEMENT GROUT TO SEAL PIPE INTO EXISTING WALL. CONTRACTOR SHALL SUBMIT TO BOARD ENGINEER FOR REVIEW AND APPROVAL THE GROUT MIX AND INSTALLATION DETAILS.



BUBBLER TUBE
CLAMP ASSEMBLY DETAIL
N.T.S.



NOTE:
ALL HARDWARE, PIPE AND FITTINGS TO BE TYPE 316 STAINLESS STEEL.

STATE OF LOUISIANA
John W. Holtgreve, Jr.
REG. No. 16383
REGISTERED
PROFESSIONAL ENGINEER
ENGINEERING
6/5/13

MECHANICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

REHABILITATION OF DRY WELL
FOR WET WELL SERVICE - 2

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. TH/BD
TRC. --
CK. DS/CW
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SCALE: AS SHOWN
DATE: JANUARY 2012

GENERAL SUPERINTENDENT

DWG. No. 12039-W-63

SET NO.
SHEET NO. 29A

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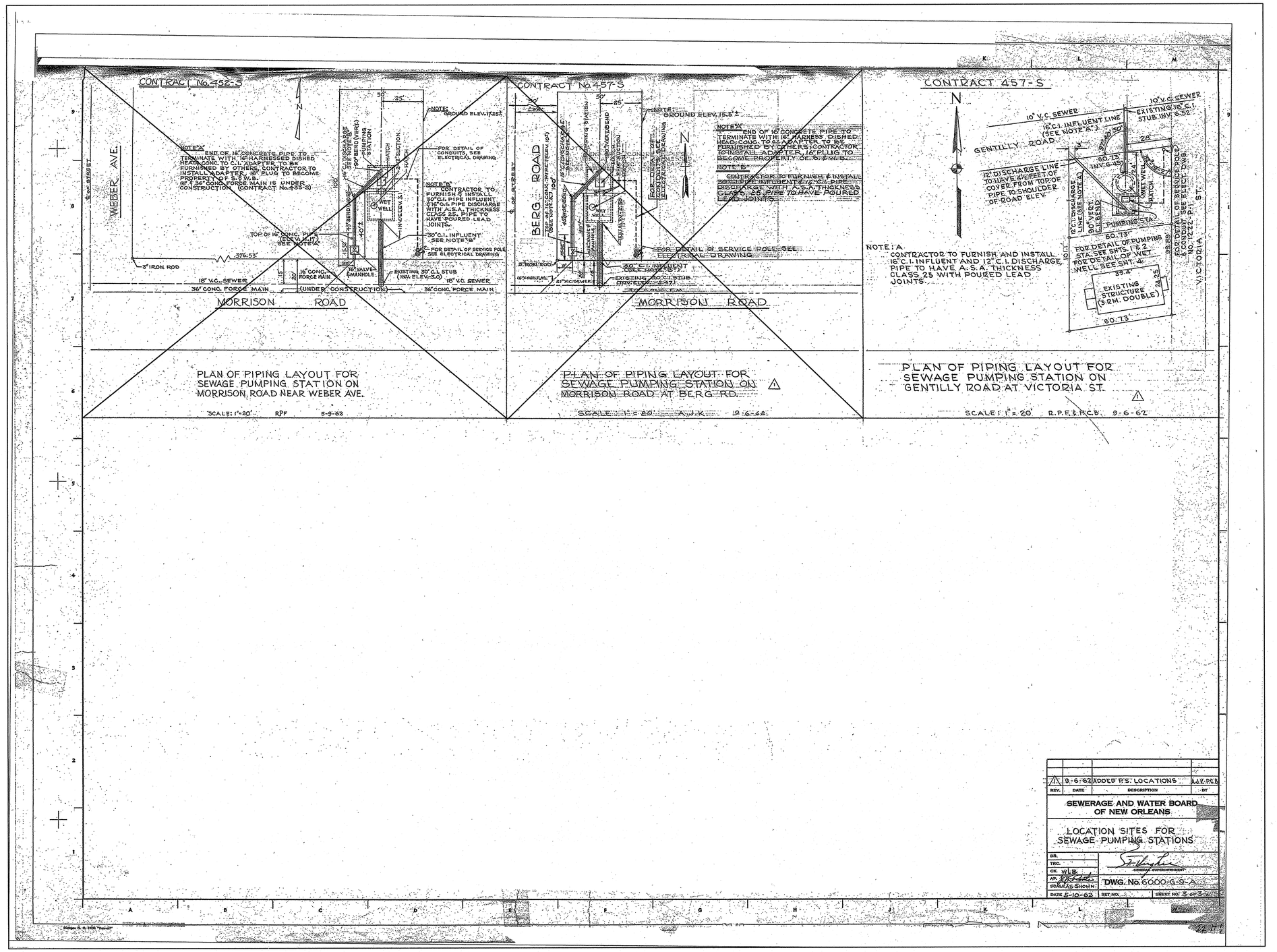


REV.	DATE	DESCRIPTION	BY
1	9-6-62	ADDED P.S. LOCATIONS	A.J.K.-P.C.B.

SEWERAGE AND WATER BOARD OF NEW ORLEANS

LOCATION SITES FOR SEWAGE PUMPING STATIONS

DR. | TRC. | CK. W.L.B. | AP. | SCALE: AS SHOWN | DATE 5-10-62 | SET NO. | SHEET NO. 3 OF 3 SHTS.

GENERAL SUPERINTENDENT

DWG. No. 6000-G-S-A

NOTE:

PROVIDED BY SEWERAGE AND WATER BOARD FOR INFORMATIONAL PURPOSES ONLY.

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

REFERENCE DRAWING

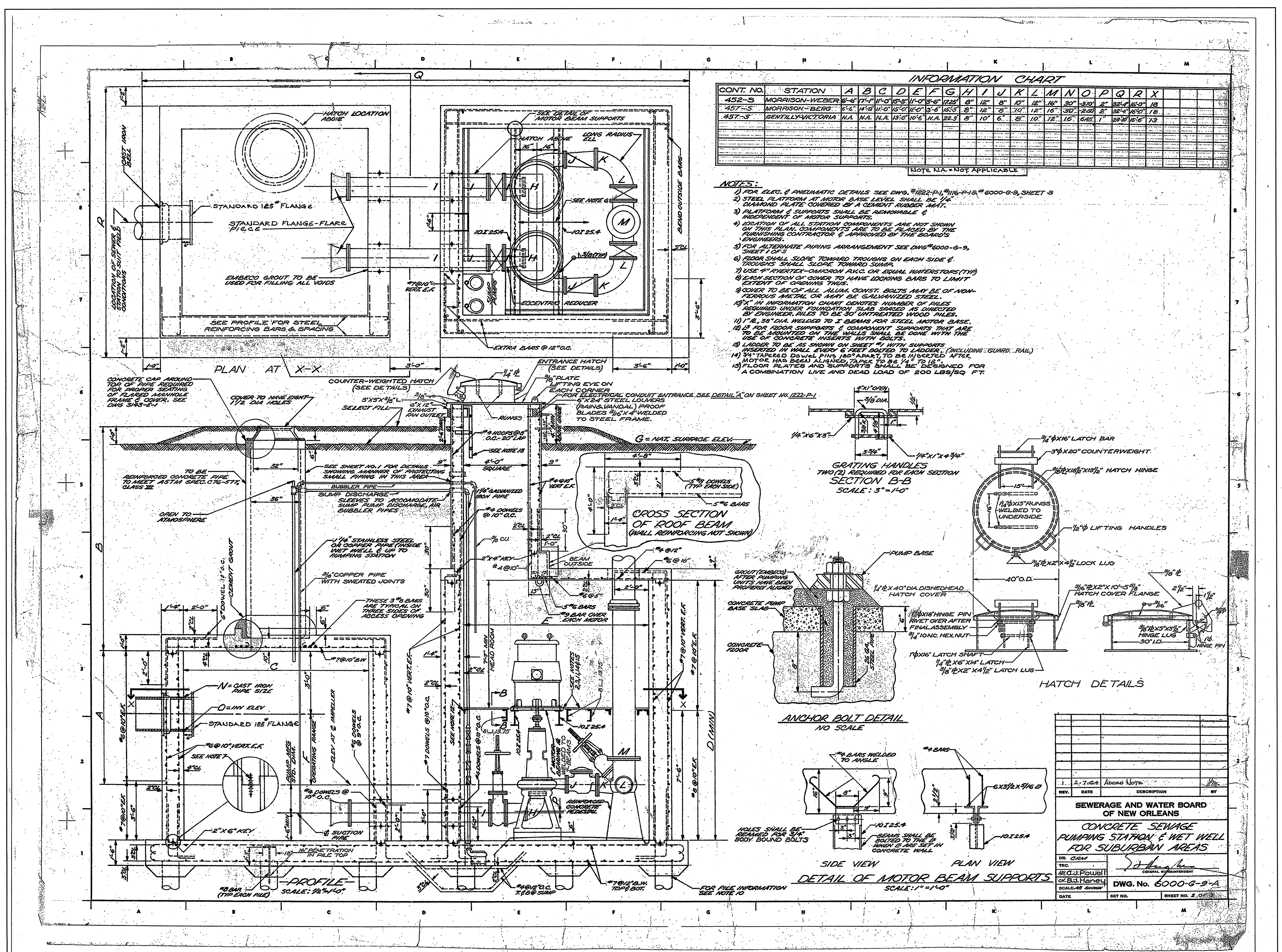
DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DR. -- | TRC. -- | CK. -- | AP. -- | SCALE: AS SHOWN | DATE: JANUARY 2012

GENERAL SUPERINTENDENT

DWG. No. 12039-W-63

SET NO. | SHEET NO. 30



INFORMATION CHART
CONT. NO. | STATION | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | X
452-S | MORRISON-WEBER | 6'-6" | 17'-1" | 11'-0" | 15'-3" | 11'-0" | 3'-6" | 17.25' | 8" | 12" | 8" | 10" | 12" | 16" | 30" | -3.10' | 2" | 32'-4" | 16'-0" | 18
457-S | MORRISON-BERG | 6'-6" | 14'-9" | 11'-0" | 15'-0" | 11'-0" | 3'-6" | 15.5' | 8" | 12" | 8" | 10" | 12" | 16" | 30" | -2.50' | 2" | 32'-4" | 16'-0" | 18
457-S | GENTILLY-VICTORIA | N.A. | N.A. | N.A. | 13'-0" | 10'-6" | N.A. | 22.3' | 8" | 10" | 6" | 8" | 10" | 12" | 16" | 6.45' | 1" | 24'-10" | 15'-6" | 13
NOTE N.A. = NOT APPLICABLE
NOTES:
1) FOR ELEC. & PNEUMATIC DETAILS SEE DWG. #1222-P-1, #1116-P-1 & #6000-G-9, SHEET 3
2) STEEL PLATFORM AT MOTOR BASE LEVEL SHALL BE 1/4" DIAMOND PLATE COVERED BY A CEMENT RUBBER MAT.
3) PLATFORM & SUPPORTS SHALL BE REMOVABLE & INDEPENDENT OF MOTOR SUPPORTS.
4) LOCATION OF ALL STATION COMPONENTS ARE NOT SHOWN ON THIS PLAN. COMPONENTS ARE TO BE PLACED BY THE FURNISHING CONTRACTOR & APPROVED BY THE BOARD'S ENGINEERS.
5) FOR ALTERNATE PIPING ARRANGEMENT SEE DWG #6000-G-9, SHEET 1 OF 5
6) FLOOR SHALL SLOPE TOWARD TROUGHS ON EACH SIDE & TROUGHS SHALL SLOPE TOWARD SUMP.
7) USE 4" RYERTEX-OMICRON P.V.C. OR EQUAL WATERSTOPS (TYP)
8) EACH SECTION OF COVER TO HAVE LOCKING BARS TO LIMIT EXTENT OF OPENING THUS.
9) COVER TO BE OF ALL ALUM. CONST. BOLTS MAY BE OF NON-FERROUS METAL OR MAY BE GALVANIZED STEEL.
10) "X" IN INFORMATION CHART DENOTES NUMBER OF PILES REQUIRED UNDER FOUNDATION SLAB SPACED AS DIRECTED BY ENGINEER. PILES TO BE 30' UNTREATED WOOD PILES.
11) 1" PL, 38" DIA. WELDED TO I BEAMS FOR STEEL MOTOR BASE.
12) LS FOR FLOOR SUPPORTS & COMPONENT SUPPORTS THAT ARE TO BE MOUNTED ON THE WALLS SHALL BE DONE WITH THE USE OF CONCRETE INSERTS WITH BOLTS.
13) LADDER TO BE AS SHOWN ON SHEET #1 WITH SUPPORTS INSERTED IN WALL EVERY 6 FEET BOLTED TO LADDER. (INCLUDING GUARD RAIL)
14) 3/4" TAPERED DOWEL PINS 180° APART, TO BE INSERTED AFTER MOTOR HAS BEEN ALIGNED, TAPER TO BE 1/4" TO 12".
15) FLOOR PLATES AND SUPPORTS SHALL BE DESIGNED FOR A COMBINATION LIVE AND DEAD LOAD OF 200 LBS/SQ FT.
PLAN AT X-X
PROFILE
CROSS SECTION OF ROOF BEAM
SECTION B-B
GRATING HANDLES
HATCH DETAILS
ANCHOR BOLT DETAIL
DETAIL OF MOTOR BEAM SUPPORTS
SEWERAGE AND WATER BOARD OF NEW ORLEANS
CONCRETE SEWAGE PUMPING STATION & WET WELL FOR SUBURBAN AREAS
DWG. No. 6000-G-9-A

NOTE:

PROVIDED BY SEWERAGE AND WATER BOARD FOR INFORMATIONAL PURPOSES ONLY.

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

REFERENCE DRAWING

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

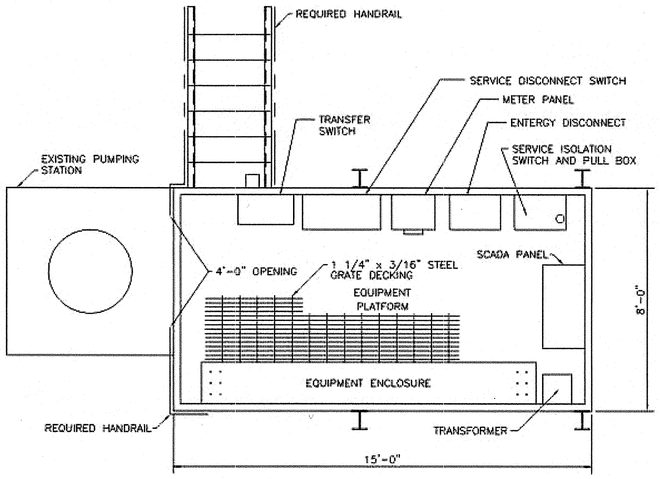
DR. ---
TRC. ---
CK. ---
AP. ---
SCALE: AS SHOWN
DATE: JANUARY 2012

GENERAL SUPERINTENDENT

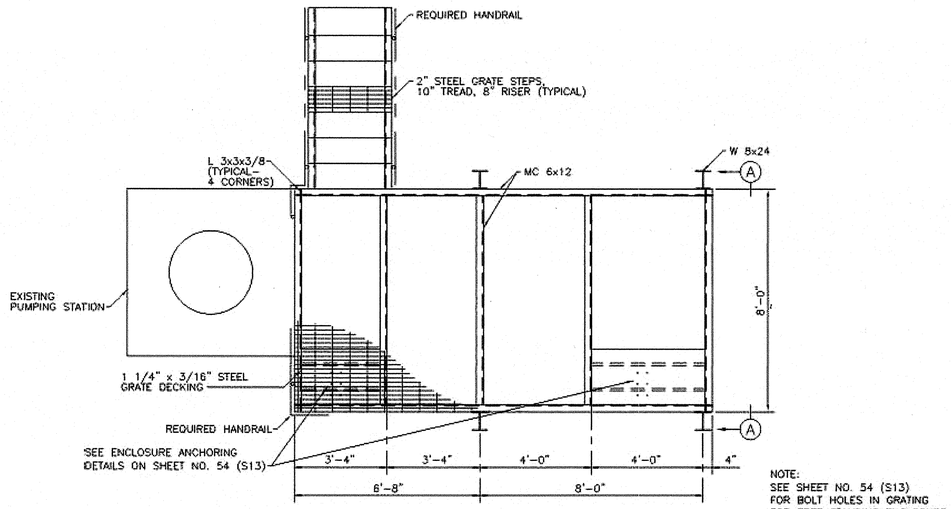
DWG. No. 12039-W-63

SET NO.

SHEET NO. 31

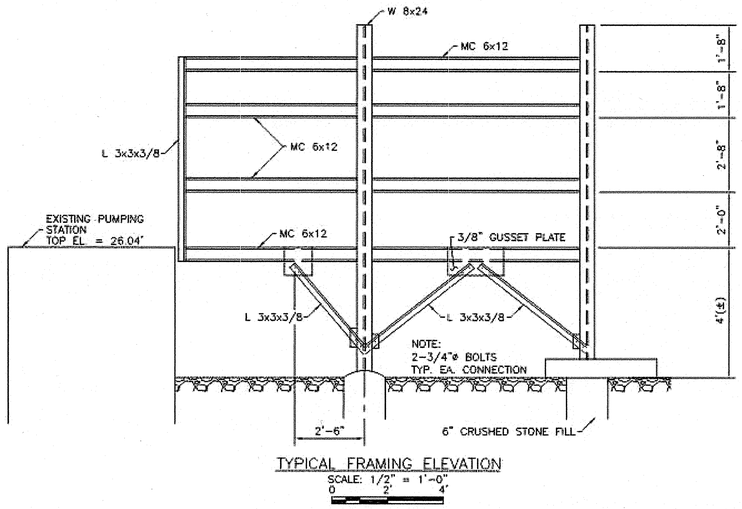


TYPICAL FLOOR PLAN
SCALE: 1/2" = 1'-0"
0 2' 4'

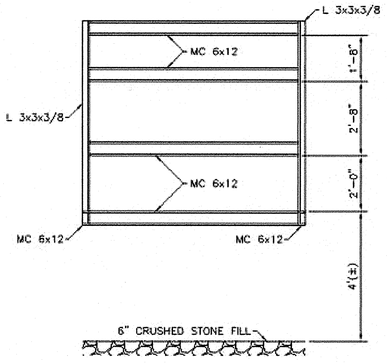


FLOOR FRAMING PLAN
SCALE: 1/2" = 1'-0"
0 2' 4'

NOTE:
SEE SHEET NO. 54 (S13) FOR BOLT HOLES IN GRATING FOR FREE STANDING ENCLOSURE



TYPICAL FRAMING ELEVATION
SCALE: 1/2" = 1'-0"
0 2' 4'



SIDE ELEVATION AT PERIPHERY (A)-(A)
SCALE: 1/2" = 1'-0"
0 2' 4'

NOTES:

1.) ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.

2.) WELDING SHALL BE ELECTRIC ARC WELDING OR OTHER APPROVED METHOD CONFORMING TO AWS D1.1

3.) ANCHOR BOLTS SHALL BE ASTM F1554, 55 KSI.

4.) ALL STEEL SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

5.) ALL WELDS SHALL BE CONTINUOUS TO PREVENT ENTRY OF MOISTURE BETWEEN TWO METAL PIECES IN CONTACT.

6.) GALVANIZED SURFACES DAMAGED AFTER ZINC COATING SHALL BE REPAIRED BY REMOVING LOOSE AND CRACKED COATING AFTER WHICH THE CLEANED AREA SHALL BE REPAIRED BY APPLYING COLD GALVANIZING REPAIR COMPOUND LIKE GALV-COAT BY BOWMAN OR GALVANOX, TYPE 1 BY BASF WYANDOTTE CORP. OR EQUAL.

STRUCTURAL

REV.	DATE	DESCRIPTION	BY
1		RECORD DRAWING	NH

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3633
HURRICANE KATRINA RELATED REPAIRS TO BULLARD, DODT STREET, LAKE FOREST, PLUM ORCHARD LAWRENCE AND VICTORIA SEWAGE PUMPING STATIONS

VICTORIA SEWAGE PUMPING STATION
ELEVATED PLATFORM FOR ELECTRICAL EQUIPMENT

DR. M.Z.
TRC.
CK. M.S.
AP. J.H.
SCALE: AS SHOWN
DATE: DECEMBER, 2009
GENERAL SUPERINTENDENT
DWG. No. 12012-W-63
SET NO.
SHEET NO. S11

VICTORIA S.P.S.

NOTE:

PROVIDED BY SEWERAGE AND WATER BOARD FOR INFORMATIONAL PURPOSES ONLY.

DESIGN ENGINEERING INC.
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(504) 836-2155

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SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

REFERENCE DRAWING

DR. --
TRC. --
CK. --
AP. --
SCALE: AS SHOWN
DATE: JANUARY 2012
GENERAL SUPERINTENDENT
DWG. No. 12039-W-63
SET NO.
SHEET NO. 32

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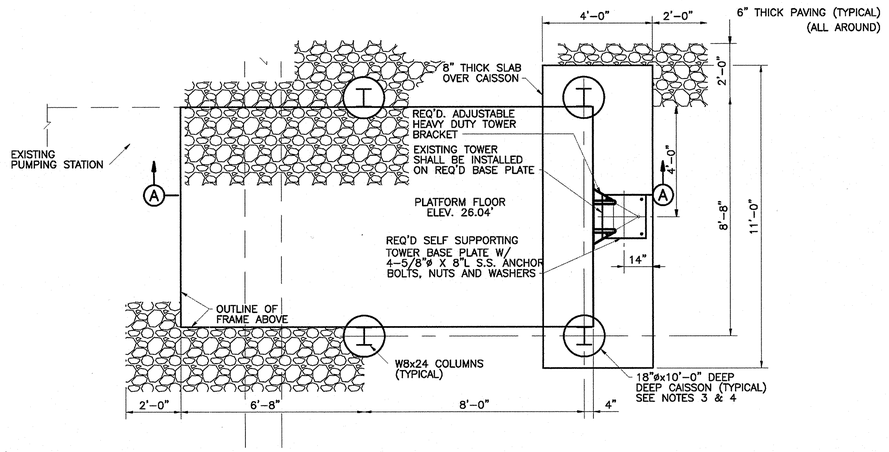
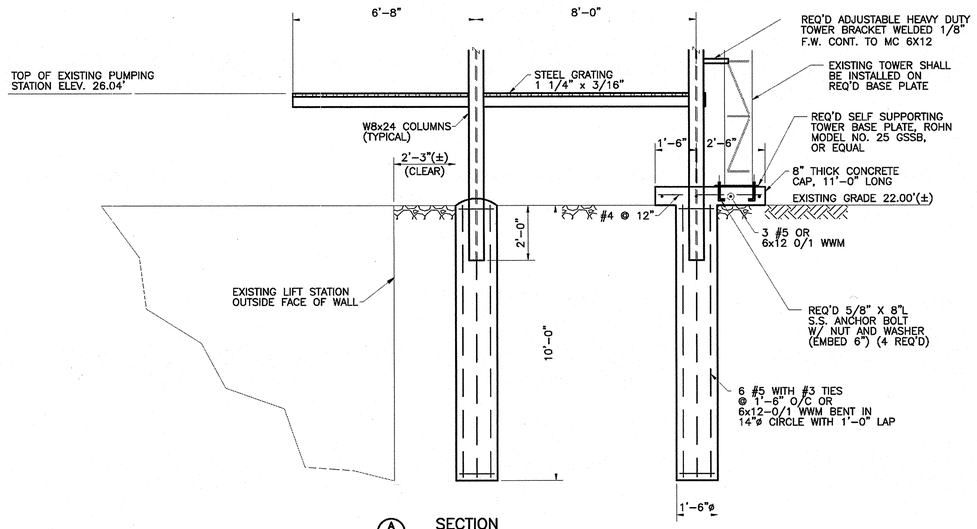


FOUNDATION PLAN
SCALE: 1/2" = 1'-0"
0 2' 4'



A SECTION
SCALE: 1/2" = 1'-0"
0 2' 4'

NOTE:
HAND RAILINGS NOT SHOWN FOR CLARITY.

VICTORIA S.P.S.

NOTE:
FRAME IS DESIGNED FOR FOLLOWING LOADS:

1.) FLOOR LOAD: 100 PSF
2.) WIND SPEED: 130 MPH
3.) EXPOSURE: C
4.) IMPORTANCE FACTOR: 1.15

FOUNDATION NOTES:

1.) DRILLED SHAFT WORK SHALL BE PERFORMED BY CONTRACTOR EXPERIENCED IN THIS FIELD.
2.) ACCORDING TO EUSTIS SOIL REPORT GROUND WATER AFTER ELAPSED PERIOD OF 24 HOURS CAN BE EXPECTED AT 3' BELOW GROUND LEVEL.
3.) IF GROUND WATER IN THE HOLE IS 3" OR LESS, PLACE CEMENT AND SAND MIX FOR 3" THICK LAYER AND COMPACT IT PROPERLY BEFORE PLACING CONCRETE.
4.) THE CASING SHALL BE STEEL PIPE CONFORMING TO ASTM A 53 WITH A MINIMUM WALL THICKNESS OF 0.125" OR EQUAL. CONTRACTOR CAN USE CORRUGATED METAL PIPE CASING WHICH CAN WITHSTAND OUTSIDE CIRCUMFERENTIAL PRESSURE OF 8.00 PSI WITH A FACTOR OF SAFETY OF 2.00.
5.) CONCRETE SHALL BE PLACED IN TEMPORARY OR PERMANENT CASING AND IN THE DRY. REMOVE CASING WHILE CONCRETE IS BEING POURED. KEEP BOTTOM OF CASING 5' BELOW TOP OF CONCRETE SURFACE DURING WITHDRAWAL.
6.) BOLTS SHALL CONFORM TO ASTM F1554 *Fy*=55ksi

CONCRETE NOTES:

1.) CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2.) REINFORCING BARS SHALL BE A615 AND WWM SHALL BE A185.

STATE OF LOUISIANA
M. B. SHUKLA
REG. No. 17008
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
Dec 8, 09

STRUCTURAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3633
HURRICANE KATRINA RELATED REPAIRS TO
BULLARD, DODT STREET, LAKE FOREST, PLUM ORCHARD
LAWRENCE AND VICTORIA SEWAGE PUMPING STATIONS

VICTORIA SEWAGE PUMPING STATION
ELEVATED PLATFORM FOR ELECTRICAL EQUIPMENT

DR. M.Z.
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CK. M.S.
AP. J.H.
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DWG. No. 12012-W-63
SET NO.
SHEET NO. 53

S12

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NOTE:
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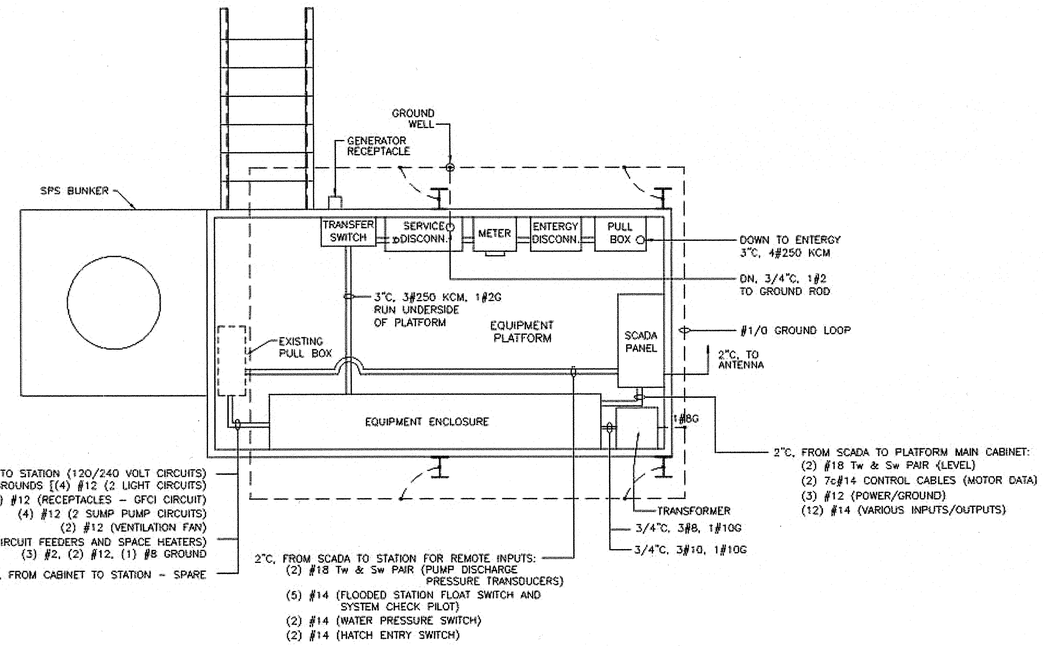
SET NO.
SHEET NO. 33



12-7-09

ELECTRICAL

REV	DATE	DESCRIPTION	BY
1		RECORD DRAWING	NH

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3633
HURRICANE KATRINA RELATED REPAIRS TO BULLARD, 000T STREET, LAKE FOREST, PLUM ORCHARD LAWRENCE AND VICTORIA SEWAGE PUMPING STATIONS

VICTORIA SEWAGE PUMPING STATION
ELEVATED PLATFORM FOR RAISING ELECTRICAL EQUIPMENT

DR.
CK.
AP. GENERAL SUPERINTENDENT
LAST EDIT.
SCALE 1/8"=1'-0"
DATE 10/22/2009
SET NO. SHEET NO. 71

E17

DWG. No. 5005-P17

NOTE:

PROVIDED BY SEWERAGE AND WATER BOARD FOR INFORMATIONAL PURPOSES ONLY.

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

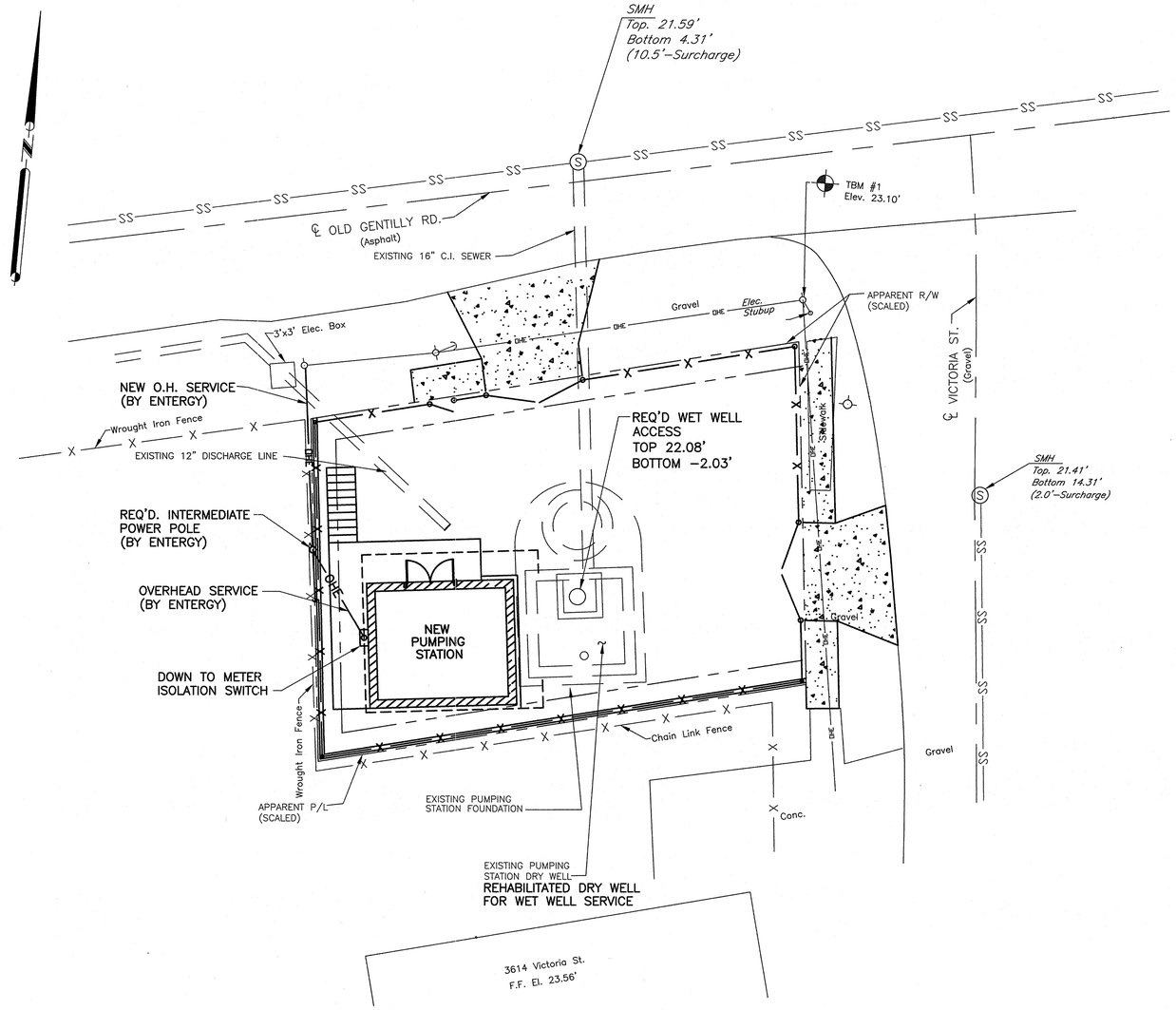
CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

REFERENCE DRAWING

DR. --
TRC. --
CK. --
AP. --
GENERAL SUPERINTENDENT
SCALE: AS SHOWN
DATE: JANUARY 2012
SET NO.

DWG. No. 12039-W-63

SHEET NO. 34

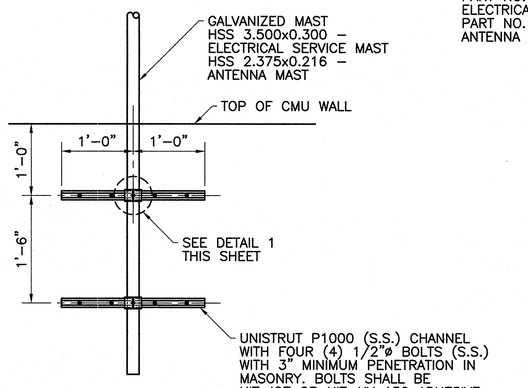


REQUIRED ELECTRICAL SITE PLAN

SCALE: 1" = 10'

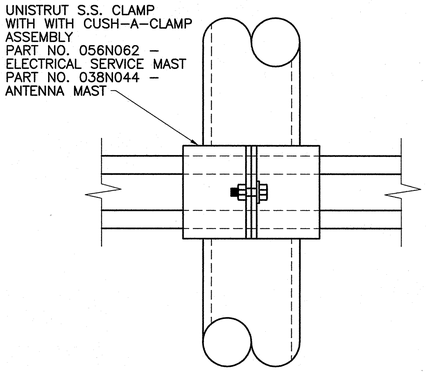
10 0 10 20

SCALE IN FEET



ELEVATION

SCALE: 1" = 1'-0"



DETAIL 1

UNISTRUT CLAMP DETAIL

SCALE: N.T.S.

SUGGESTED MAST ANCHORING DETAIL

LEGEND

- Light Pole
- Power Pole
- Guy Anchor
- Drain Manhole
- Sanitary Sewer Manhole
- Station Tower
- Survey Baseline Point
- Sign
- Fire Hydrant
- Bollard
- + 20.00 Elevation Shot
- X X X X Existing Fence
- DHE Overhead Power Line
- SS SS SS Sanitary Sewer Line
- E E E Existing Underground Electric Service
- EN EN EN Required Underground Electric Service
- OHE Required Overhead Electric Service

TBM #1 - 80d NAIL IN P.P. CORNER OF VICTORIA ST. AND OLD GENTILLY RD., ELEV. = 23.10 C.D.

NOTE:
THE EXISTING PUMPING STATION AND ELEVATED ELECTRICAL PLATFORM SHALL REMAIN IN-SERVICE FOR AS LONG AS POSSIBLE DURING THE CONSTRUCTION OF THE NEW PUMPING STATION BUILDING. WHEN THE PLATFORM IS REMOVED, THE FOLLOWING ELECTRICAL EQUIPMENT SHALL BE REMOVED FROM THE ELECTRICAL PLATFORM AND RE-INSTALLED IN THE NEW STATION BUILDING:

A) AIR COMPRESSOR
B) GENERATOR RECEPTACLE
C) SCADA PANEL

ALL OTHER ELECTRICAL EQUIPMENT SHALL BE RETURNED TO SWBNO.

STATE OF LOUISIANA
Nestor James Houghton
REG. No. 22300
REGISTERED
PROFESSIONAL ENGINEER
IN
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(504) 836-2155

ELECTRICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

ELECTRICAL - REQUIRED SITE PLAN

DR. MZ	
TRC. --	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. NH	DWG. No. 5030-P1
SCALE: AS SHOWN	
DATE: JANUARY 2012	SET NO. / SHEET NO. 35

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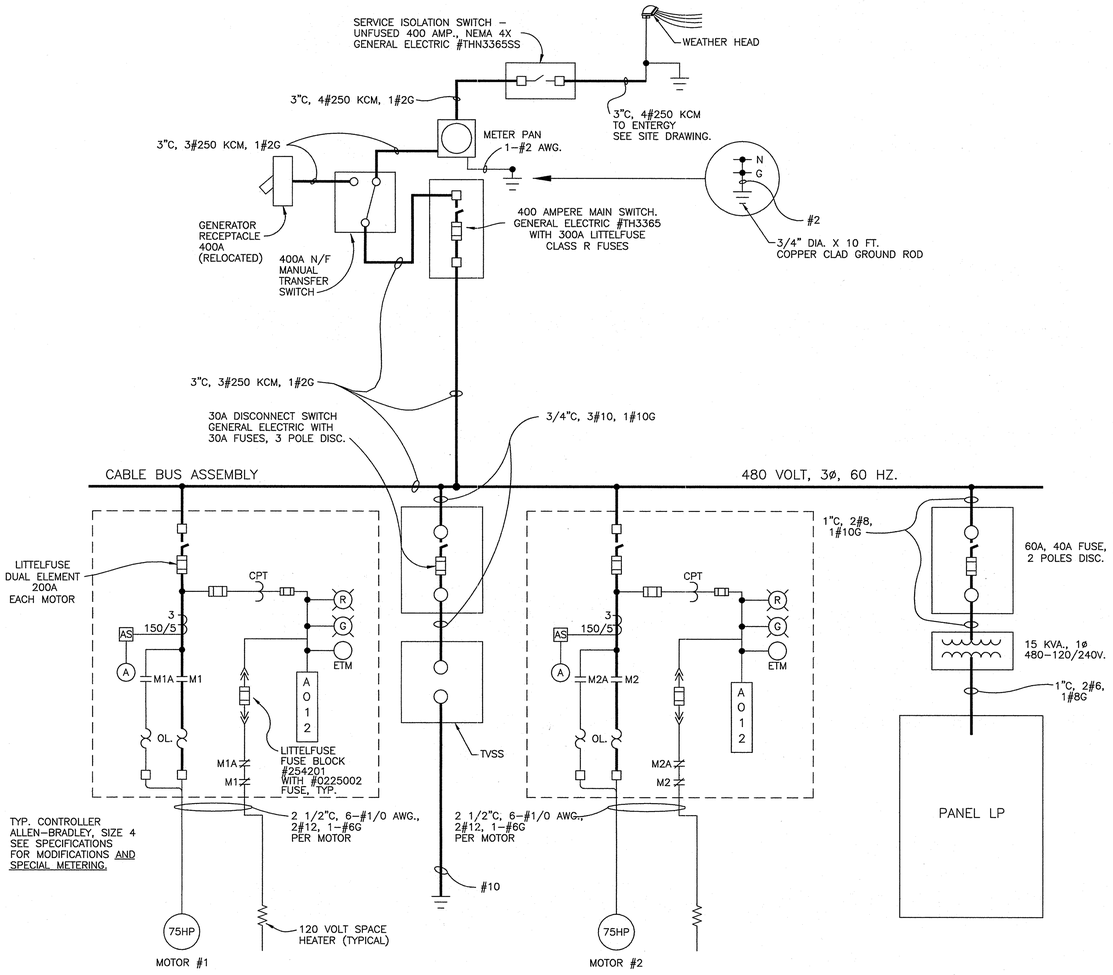
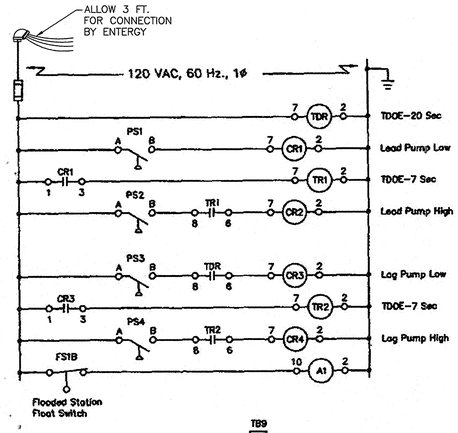
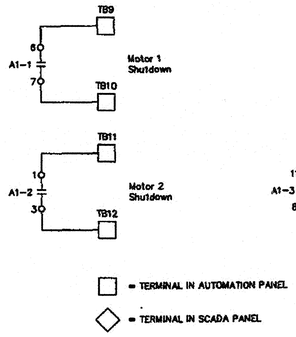
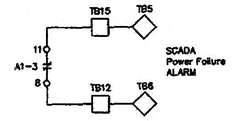
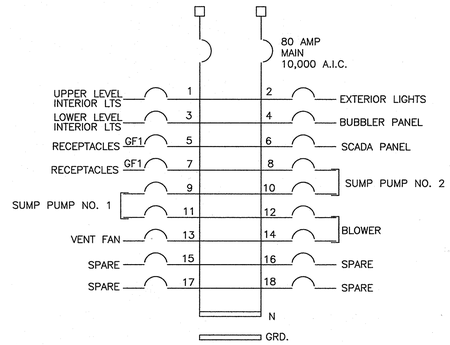


ONE LINE DIAGRAM



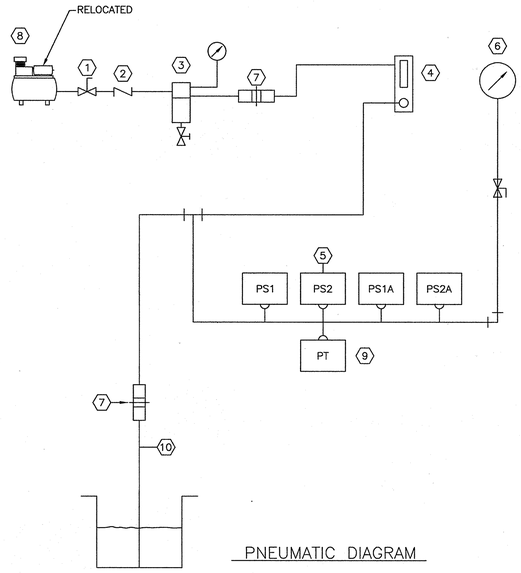






1.) ALL BREAKERS RATED 20 AMPERE, 1 POLE 10,000 A.I.C. PROVIDE 2–GFCI BREAKERS, EXCEPT SUMP PUMPS AND BLOWER ARE 2 POLE 20 AMPERE.
2.) PANEL IS GENERAL ELECTRIC TYPE AQ – SEE SPECS.

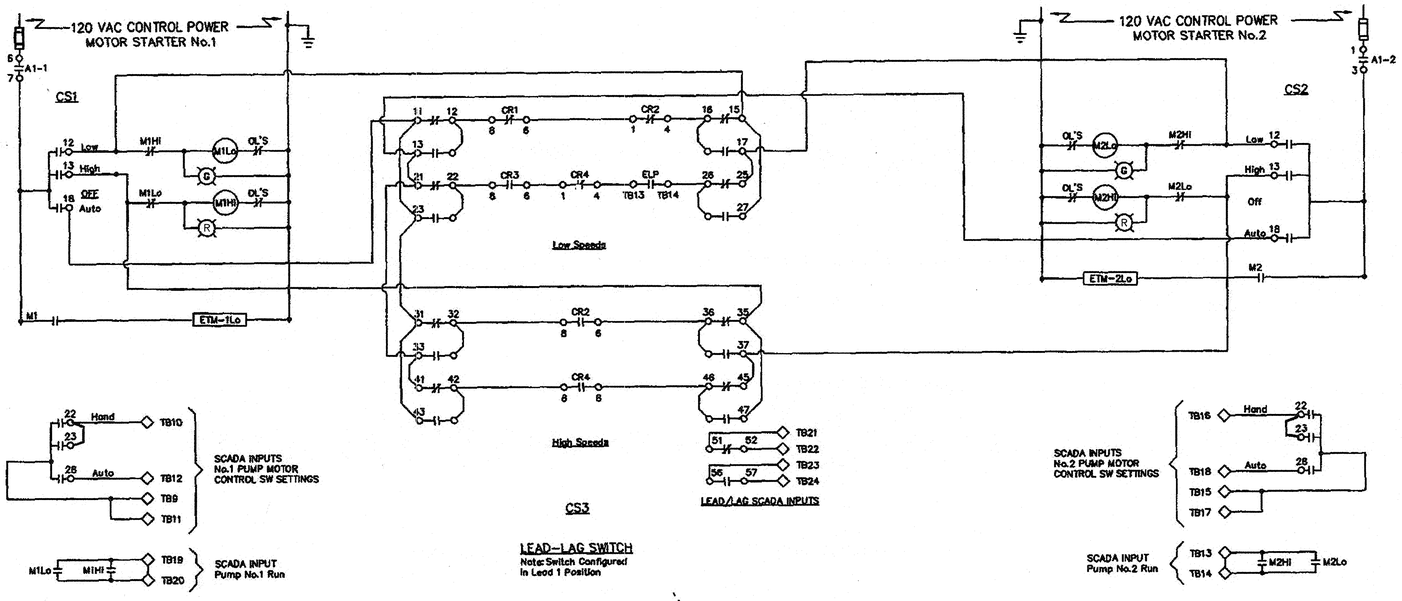
PANELBOARD "LP" SCHEDULE



PNEUMATIC DIAGRAM

PNEUMATIC SYSTEM COMPONENTS

1. STAINLESS STEEL SHUT OFF VALVE, PARKER CAT. NO. 4Z–V4LN–SS.
2. STAINLESS STEEL CHECK VALVE, PARKER CAT. NO. 4Z–C4L–1–SS.
3. AIR FILTER/REGULATOR – SPEEDAIRE "PIGGYBACK" UNIT, CAT. NO. 4Z027 WITH 1/4" N.P.T. TAPS & 0–30 P.S.I. GAUGE ON OUTPUT. MOUNT ON EXTERIOR LEFT SIDE OF CABINET.
4. PURGE METER – FISHER & PORTER CAT. NO. 10A6131–NB1B1 WITH FRONT PANEL MOUNTING.
5. PRESSURE SENSOR, HONEYWELL #L404F–1409, 15 psi. 2–6 psi. DIFFERENTIAL
6. DUAL SCALE ELEVATION GAUGE – WEKSLER #BN14WH04RW
7. BULKHEAD FITTING, SWAGELOK STAINLESS STEEL BULKHEAD UNION FOR 1/4" POLYLOW TUBING TO S.S. TUBING.
8. SPEEDAIRE MODEL 5Z598C WITH ON/OFF PRESSURE SWITCH, 0–100 psi. (MIN) GAUGE AND 3 GALLON TANK. (RELOCATED)
9. PRESSURE TO CURRENT CONVERTER – VIATRAN MODEL 347, 0–15 P.S.I.
10. 3/4" TYPE 316 S.S. PIPE, 0.113" WALL (SCH. 40).



LEGEND
CS1 & CS2 ELECTRO SWITCH #24302D
CS3: ELECTRO SWITCH #24205B

□ TERMINAL IN BUBBLER PANEL.
□ REMOTE CONNECTION TO STARTER (PROVIDE TERMINAL STRIP).
◇ TERMINAL IN SCADA PANEL.

STATE OF LOUISIANA
Nestor James Houghton
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REGISTERED PROFESSIONAL ENGINEER
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BY
6/12/13

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Metairie, LA 70002
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ELECTRICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

ELEMENTARY, PNEUMATIC, CONTROL AND ONE LINE DIAGRAMS

DR. MZ	
CK. DS/CW	
AP. NH	GENERAL SUPERINTENDENT
LAST EDIT. ––	DWG. No. 5030–P2
SCALE NOT TO SCALE	
DATE: JANUARY 2012	SET NO. / SHEET NO. 36

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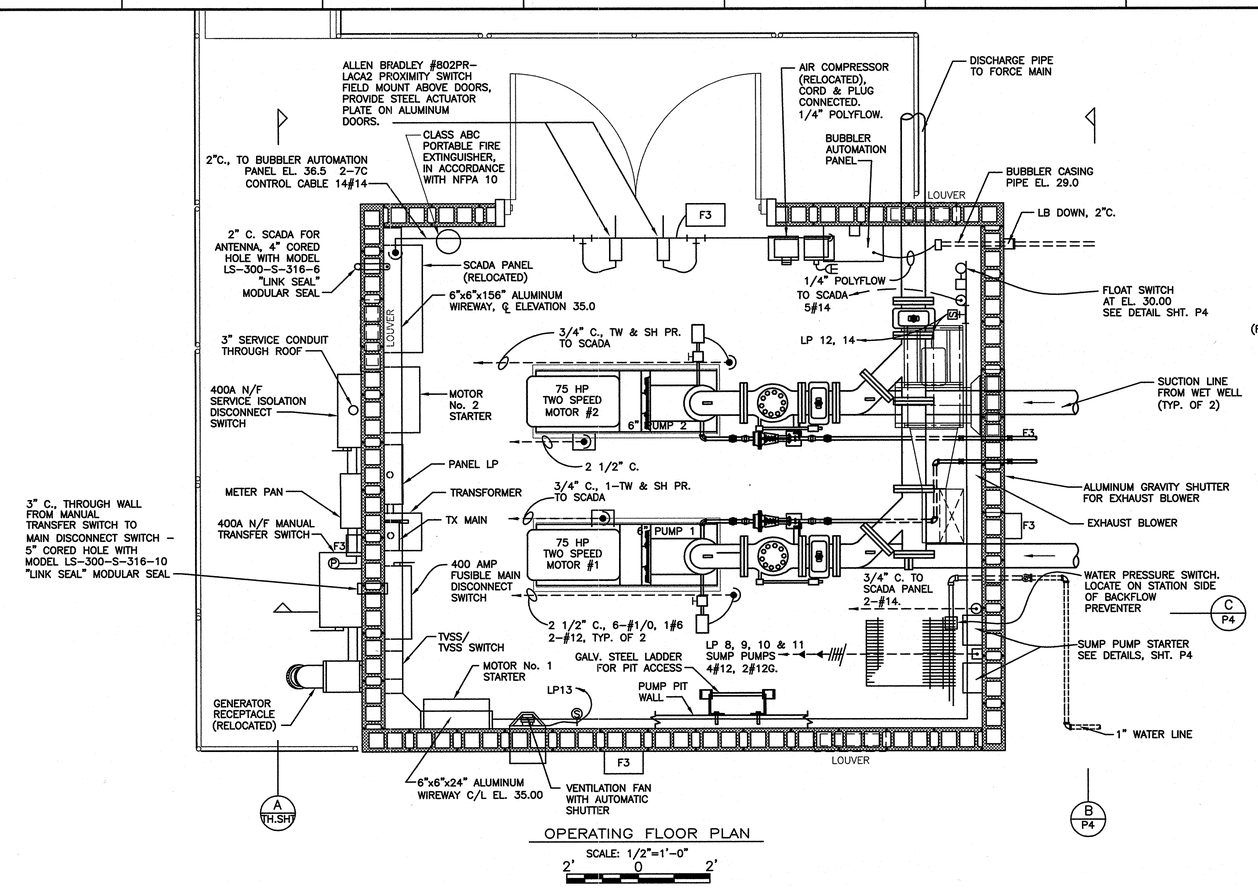
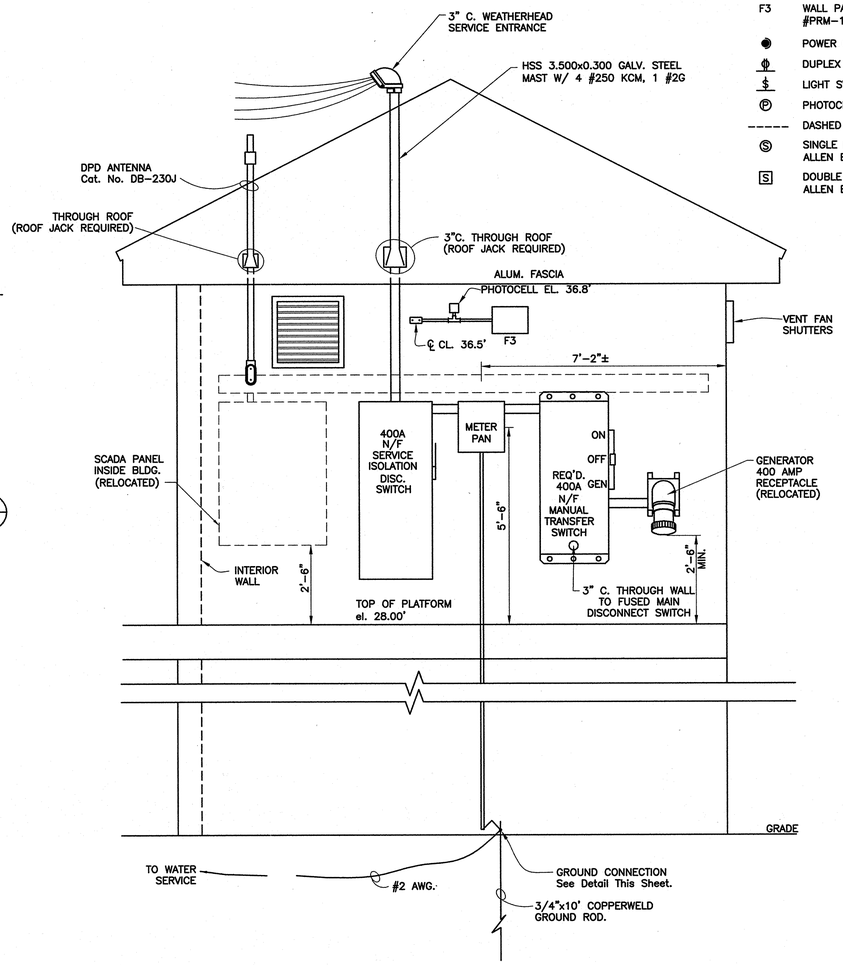


OPERATING FLOOR PLAN

SCALE: 1/2"=1'-0"

2' 0 2'



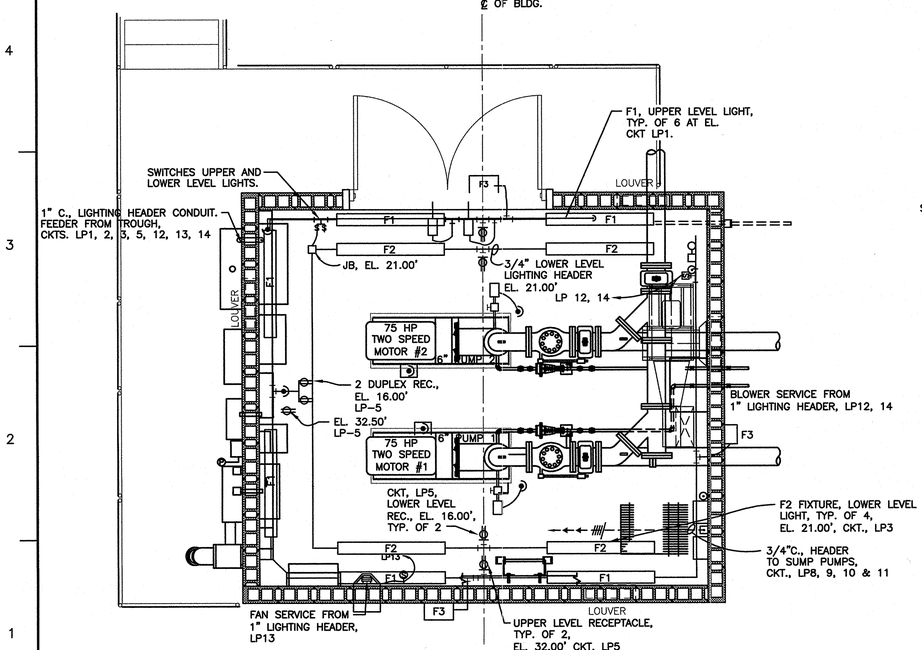
A TH.SHT STATION SERVICE ENTRANCE DETAIL

SCALE: 1/2"=1'-0"

2' 0 2'

LEGEND

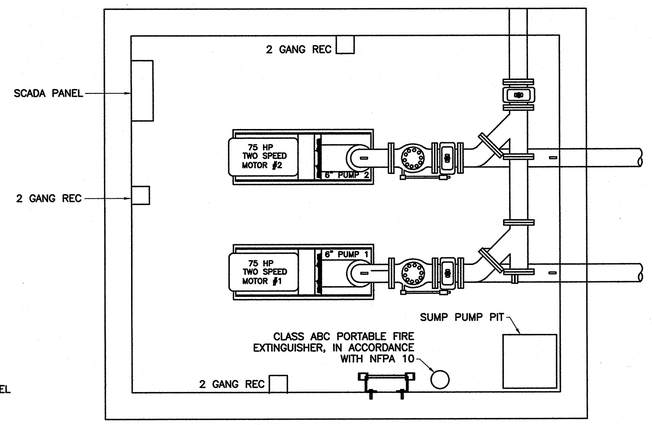
F1	WALL MOUNT FLUORESCENT FIXTURE, COLUMBIA #WPM4-232-EU
F2	WALL MOUNT FLUORESCENT FIXTURE, COLUMBIA #FNPV4-232-CA-EU24-SS WITH #PTBA WALL BRACKET
F3	WALL PACK OUTDOOR FIXTURE, HUBBELL #PRM-150S-118
●	POWER CONDUIT DROP INTO SLAB.
⌽	DUPLEX RECEPTACLE, HUBBELL #5362
$	LIGHT SWITCH, HUBBELL #1221
(P)	PHOTOCELL, HUBBELL #PTA-1
-----	DASHED CONDUIT; ENCASED IN SLAB.
(S)	SINGLE POLE MOTOR STARTING SWITCH ALLEN BRADLEY #600-TAX 216
[S]	DOUBLE POLE MOTOR STARTING SWITCH ALLEN BRADLEY #600-TAX 109



OPERATING FLOOR PLAN LIGHTING PLAN

SCALE: 3/8"=1'-0"

2' 0 2'



PUMP PIT FLOOR PLAN

SCALE: 3/8"=1'-0"

2' 0 2'

ELECTRICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

ELECTRICAL FLOOR PLAN, EXTERIOR WALL ELEVATIONS AND DETAILS

STATE OF LOUISIANA
Nestor James Houghton
REG. No. 22309
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL ENGINEERING
5/31/13

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DR. MZ
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GENERAL SUPERINTENDENT

DWG. No. 5030-P3

SET NO.

SHEET NO. 37

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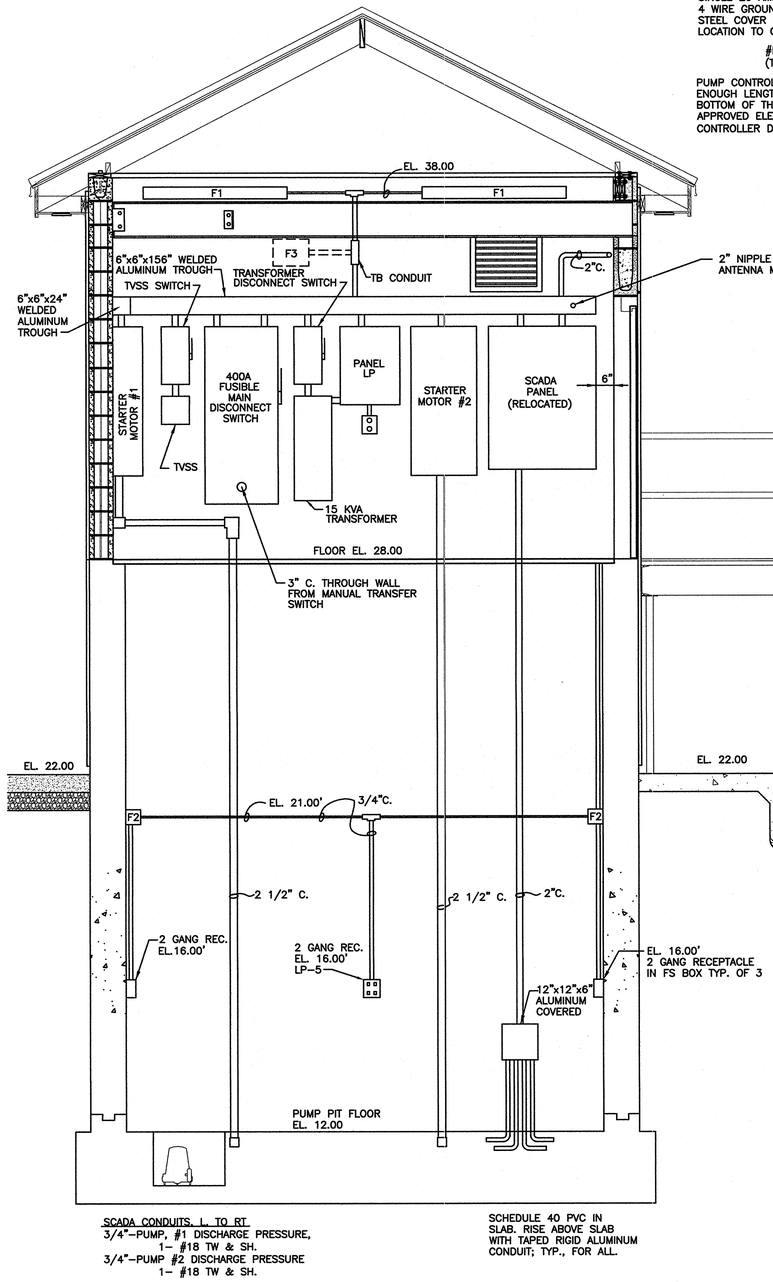
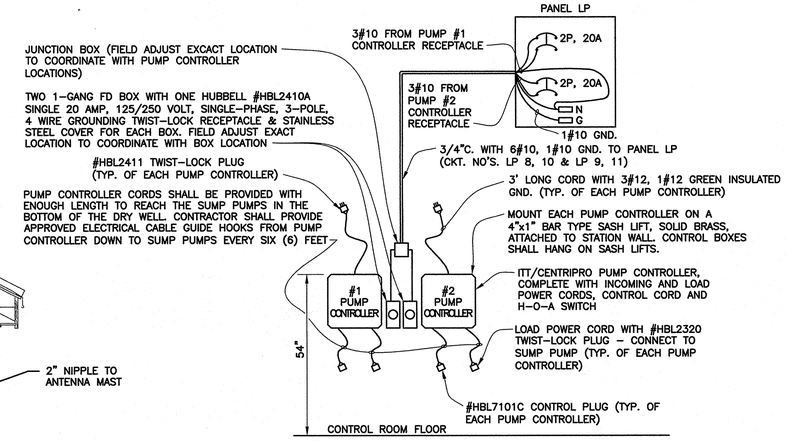


SCADA CONDUITS. L. TO RT
3/4"–PUMP, #1 DISCHARGE PRESSURE,
1– #18 TW & SH.
3/4"–PUMP #2 DISCHARGE PRESSURE
1– #18 TW & SH.

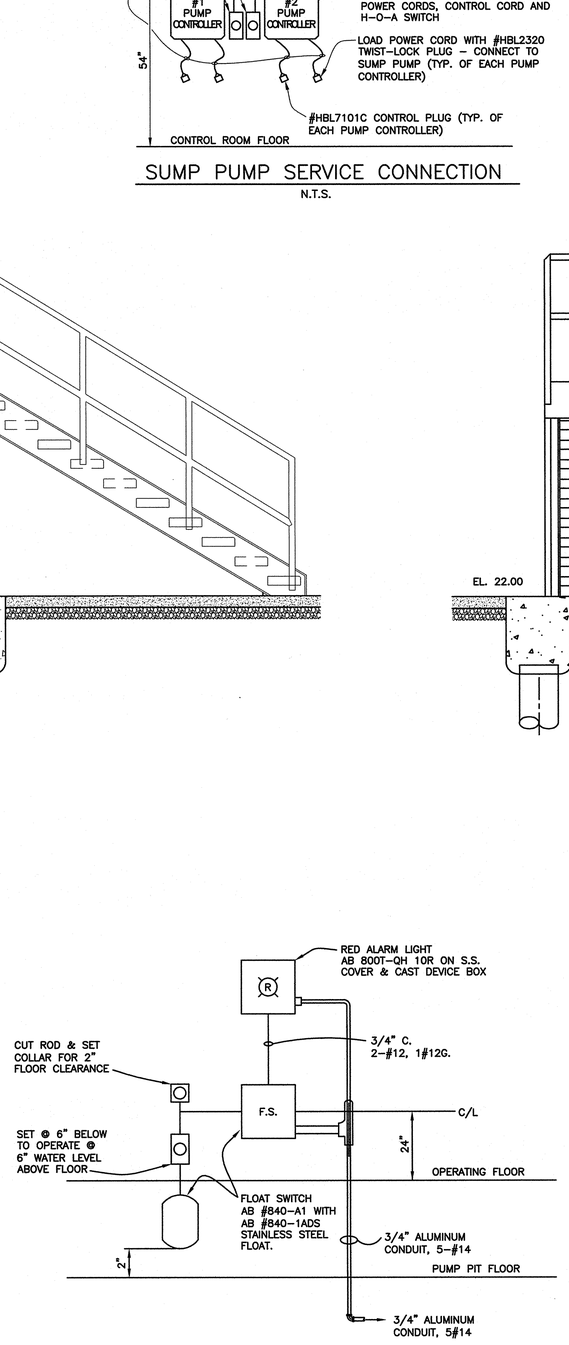
SCHEDULE 40 PVC IN SLAB. RISE ABOVE SLAB WITH TAPED RIGID ALUMINUM CONDUIT; TYP., FOR ALL.

B/P3 CROSS–SECTION OF BUILDING
SCALE: 1/2" = 1'–0"
2' 0 2'

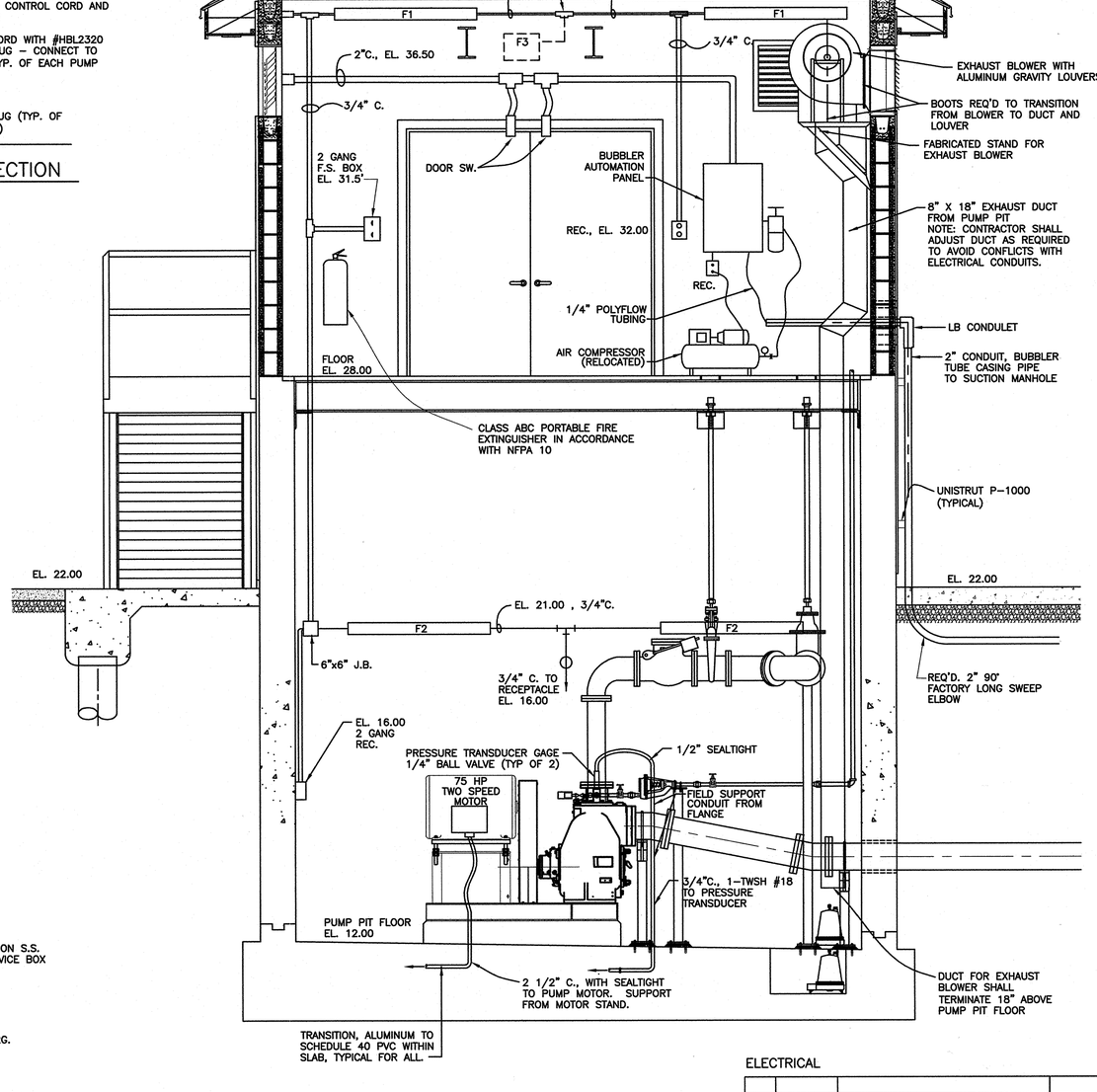
NOTE:
1. THE GROUND WIRE MUST BE TAPPED IN THE TROUGH FOR ALL LOADS.



SUMP PUMP SERVICE CONNECTION
N.T.S.



FLOODED STATION SWITCH
N.T.S.



C/P3 LONGITUDINAL SECTION OF BUILDING
SCALE: 1/2" = 1'–0"
2' 0 2'

ELECTRICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

ELECTRICAL INTERIOR WALL ELEVATIONS AND DETAILS

STATE OF LOUISIANA
Nestor James Houghton
REG. No. 22300
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL ENGINEERING
5/30/13

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DR. TH	
TRC. – –	
CK. DS/CW	GENERAL SUPERINTENDENT
AP. NH	DWG. No. 5030–P4
SCALE: AS SHOWN	
DATE: JANUARY 2012	SET NO. / SHEET NO. 38

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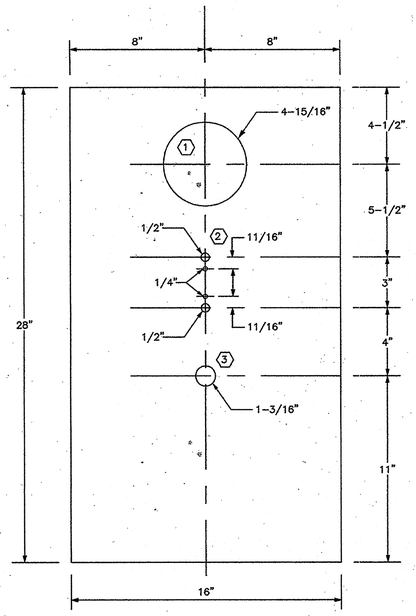
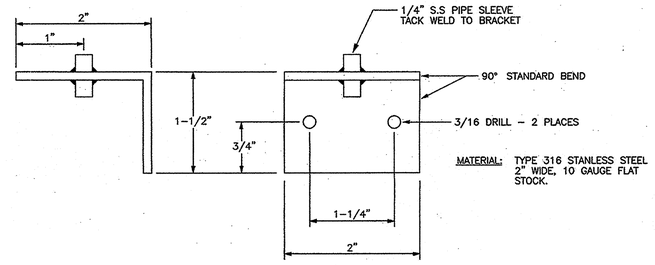


KNOCKOUT & DRILLING PLAN OF DOOR
SCALE: 3"=1'-0"

BILL OF MATERIALS

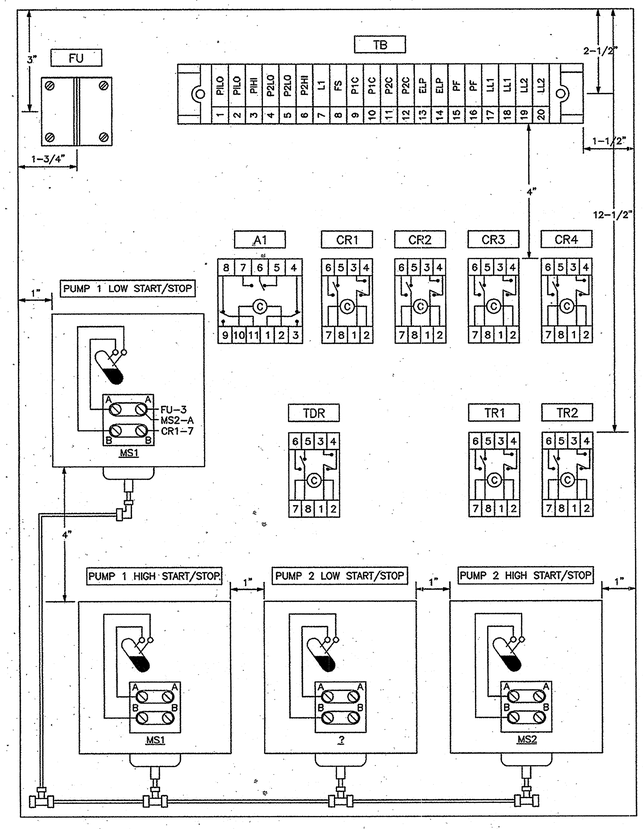
ITEM #	QUANTITY	MANUFACTURER	DESCRIPTION
1	1	WEKSLER	MODEL # BN14WH04RW, FLUSH MOUNT, 4" GAUGE DUAL SCALE: 0–15 P.S.I. & 0–35 FEET OF WATER
2	1	FISCHER & PORTER	PURGE METER, CAT. # 10A6131–NB1B1 WITH 1/4" CONNECTIONS
3	1	ELECTRO SWITCH	LEAD/LAG CONTROL SWITCH, # 24205B WITH ESCUTCHOEN ENGRAVED: "LEAD #1 – LEAD #2"
4	1	GOULD–SHAWMUT	250 VOLT, 30 AMP, 2 POLE FUSEBLOCK # 20302
5	1 LOT	ALEN BRADLEY	TERMINAL STRIP, COMPOSED OF # 1492–H14 TERMINALS, #1492–N1 MOUNTING RAIL # 1492–N36 END BARRIERS & # 1492–N23 TERMINAL END ANCHORS
6	4	POTTER & BRUMFIELD	CONTROL RELAYS # KRPA–11AG–120 WITH BASE # 27E122
7	1	POTTER & BRUMFIELD	CONTROL RELAY # KRPA–14AG–120 WITH BASE #27E123
8	3	POTTER & BRUMFIELD	TIMING RELAY # CHB–38–70002 WITH BASE # 27E122
9	4	HONEYWELL	#L404F–1409 PRESURE SWITCH, RATED AT 15 P.S.I WITH ADJUSTABLE DIFFERENTIAL 2–6 P.S.I & 50 P.S.I SURGE PRESSURE RATING, SWITCH OPERATES ON RISING EDGE.
10	1	VIATRAN	MODEL 347, 0–15 psi, PRESSURE TRANSDUCER WITH STAINLESS STEEL WIRING CAP.
11	1	HOFFMAN	ENCLOSURE # A–302010LP WITH #A30P20 MOUNTING PANEL, MODIFIED FOR # A–L2BR THREE POINT LATCH, & #C–415A KEY LOCK
12	1	AIR COMPRESSOR	RELOCATED



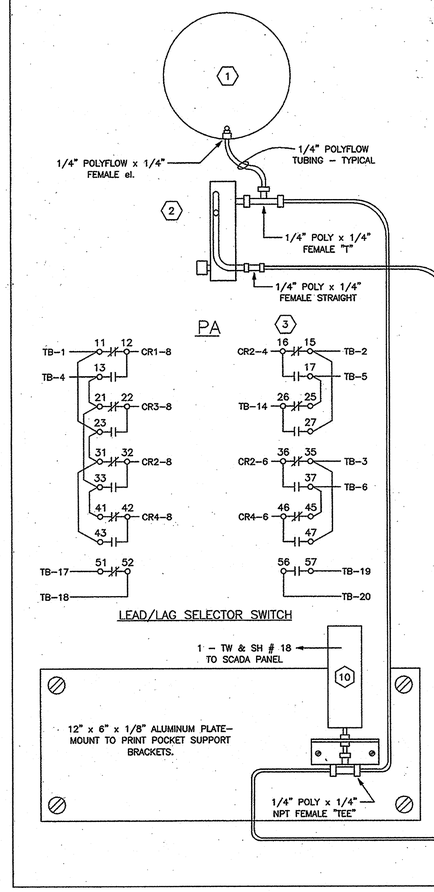
FRONT VIEW

MATERIAL: TYPE 316 STANLESS STEEL 2" WIDE, 10 GAUGE FLAT STOCK.

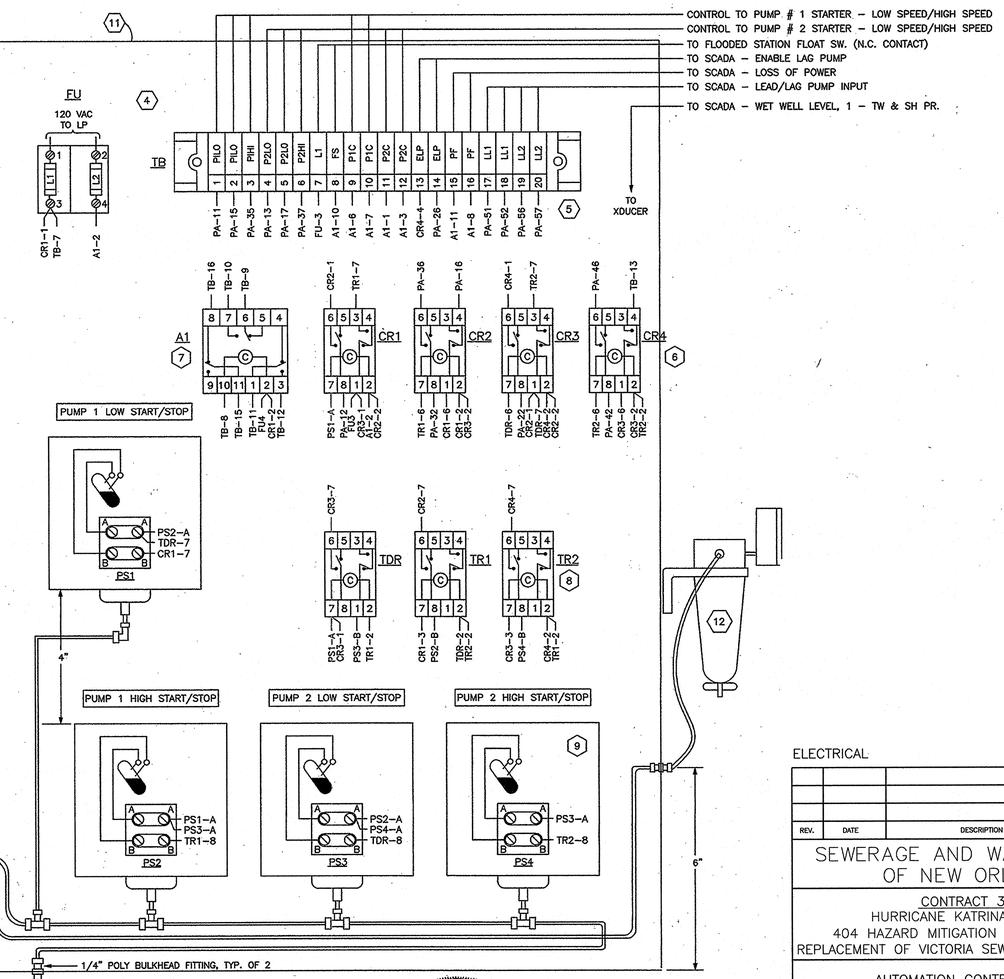
AUTOMATION PANEL TRANSDUCER BRACKET
SCALE: 1"=1'-0"



MOUNTING PANEL DEVICE LAYOUT
SCALE 1/2"=1'-0"



FRONT DOOR WIRING – REAR VIEW



PHYSICAL WIRING DIAGRAM

ELECTRICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

AUTOMATION CONTROL PANEL FABRICATION AND WIRING

STATE OF LOUISIANA
Nestor James Houghton
REG. No. 22300
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL ENGINEERING

DESIGN ENGINEERING INC.
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CK. DS/CW	
AP. NH	GENERAL SUPERINTENDENT
LAST EDIT. ---	DWG. No. 5030–P5
SCALE AS SHOWN	
DATE JANUARY 2012	SET NO. SHEET NO. 39

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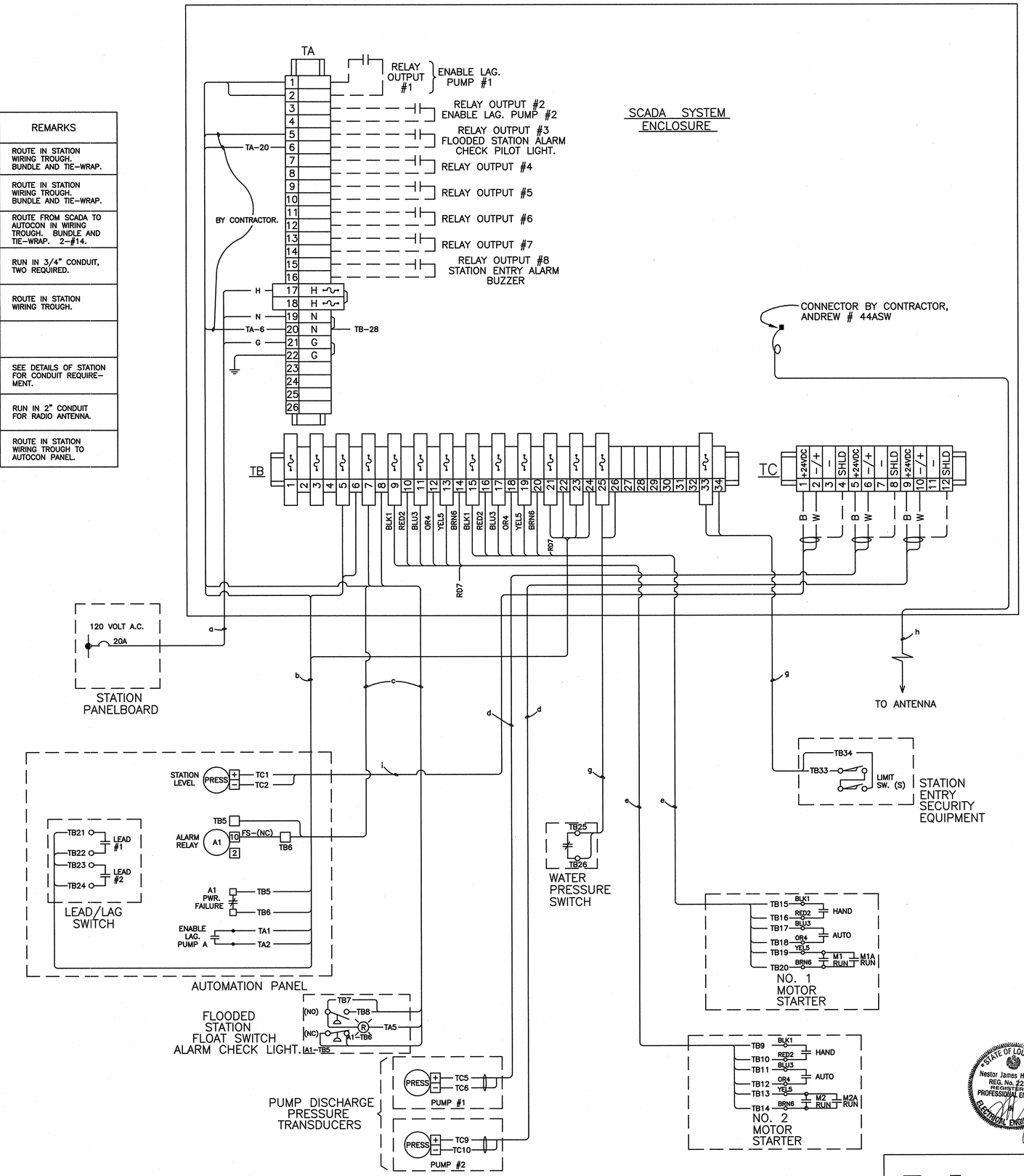
CIRCUIT ID	CONDUCTORS	DESTINATION/FUNCTION	REMARKS
a	3–#12 AWG. THHN/THWN	LIGHTING PANEL TO DATA SYSTEM ENCLOSURE. MAIN SOURCE OF POWER.	ROUTE IN STATION WIRING TROUGH. BUNDLE AND TIE–WRAP.
b	8–#14 AWG. THNN/THWN	ENCLOSURE TO STATION AUTOCON PANEL – TO INDICATE LEAD/LAG, POWER ALARM, LAG PUMP START.	ROUTE IN STATION WIRING TROUGH. BUNDLE AND TIE–WRAP.
c	5–#14 AWG. THHN/THWN	FLOODED STATION FLOAT SWITCH AND ALARM CHECK PILOT TO SCADA PANEL AND TO AUTOCON PANEL.	ROUTE FROM SCADA TO AUTOCON IN WIRING TROUGH. BUNDLE AND TIE–WRAP. 2–#14.
d	1 TW SH PAIR CABLE #18 AWG. BELDEN # 9318	ENCLOSURE TO PUMP DISCHARGE PRESSURE TRANSDUCERS.	RUN IN 3/4" CONDUIT, TWO REQUIRED.
e	7 CONDUCTOR #14 CONTROL CABLE	ENCLOSURE TO TERMINALS IN CONTROL PANEL OR MOTOR STARTERS FOR CONTROL SETTING AND MOTOR "ON" TIME.	ROUTE IN STATION WIRING TROUGH.
RESERVED			
g	2–#14 AWG. THHN/THWN (THREE CIRCUITS REQUIRED)	ENCLOSURE TO NEW STATION ENTRY LIMIT SWITCH FOR DOOR POSITION INDICATION & AUDIBLE DEVICES, AND TO STATION WATER PRESSURE SWITCH.	SEE DETAILS OF STATION FOR CONDUIT REQUIREMENT.
h	ANDREW # FSJ4–50B (1/2" SUPER–FLEX COAX CABLE)	ENCLOSURE TO RADIO ANTENNA FOR COMMUNICATION TO HOST STATION. PROVIDE CONNECTORS – EACH END.	RUN IN 2" CONDUIT FOR RADIO ANTENNA.
i	1 TW SH PAIR CABLE #18 AWG. BELDEN # 9318	ENCLOSURE TO STATION LEVEL PRESSURE SWITCH FOR WET–WELL LEVEL MONITORING.	ROUTE IN STATION WIRING TROUGH TO AUTOCON PANEL.



STATE OF LOUISIANA
Nestor James Houghton
REG. No. 22300
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL ENGINEERING

ELECTRICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

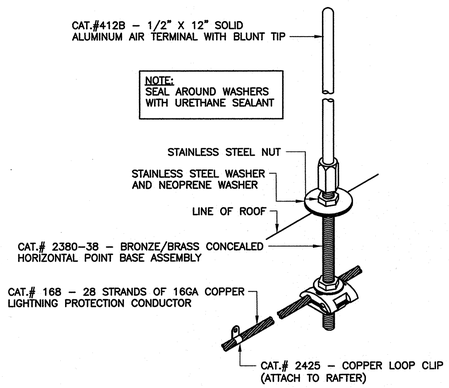
CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

SCADA PANEL RISER DIAGRAM AND DETAILS

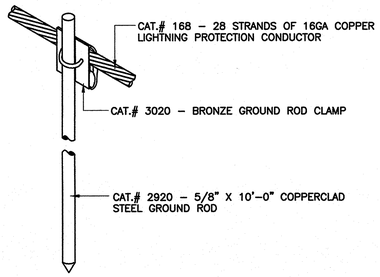
DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836–2155

DR. MZ	
CK. DS/CW	
AP. NH	GENERAL SUPERINTENDENT
LAST EDIT. ––	DWG. No. 5030–P6
SCALE: AS SHOWN	
DATE: JANUARY 2012	SET NO. SHEET NO. 40

PRINTED May 30, 2013 – 2:59pm FILENAME – J:\6005.1–GOSHEP–2013\Contract 3668 – Victoria SPS\ELECTRICAL\SHT 40_ELEC_VICTORIA_BLDG_SCADA_REV.dwg

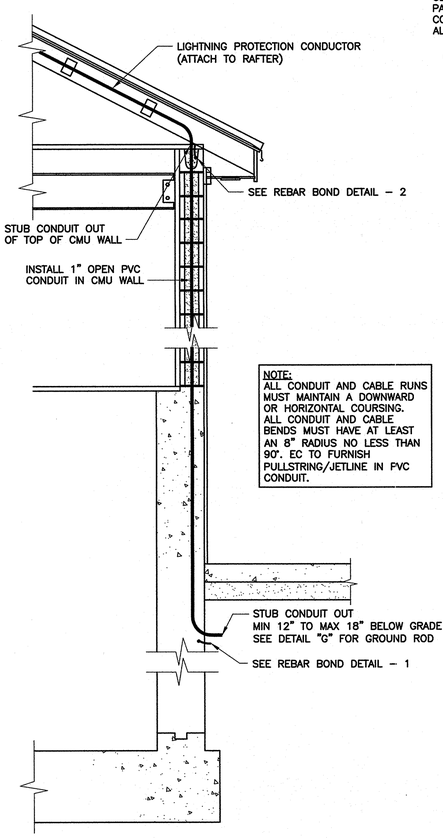


DETAIL "A"

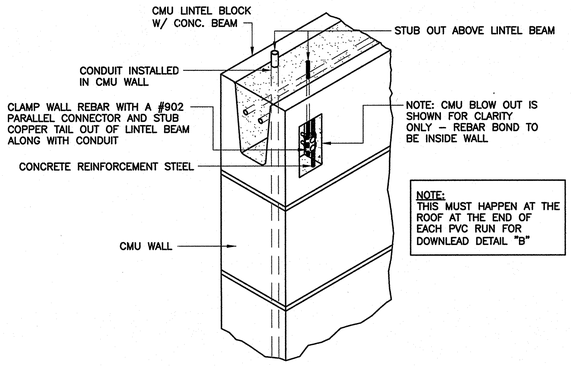


NOTE: CONTRACTOR SHALL LOCATE ASSEMBLY TO AVOID CONFLICTS WITH ROOF FRAMING MEMBERS

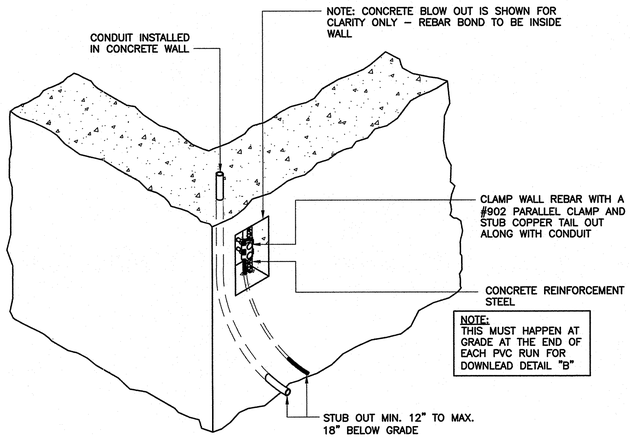
DETAIL "G"



DOWNLEAD DETAIL – "B"



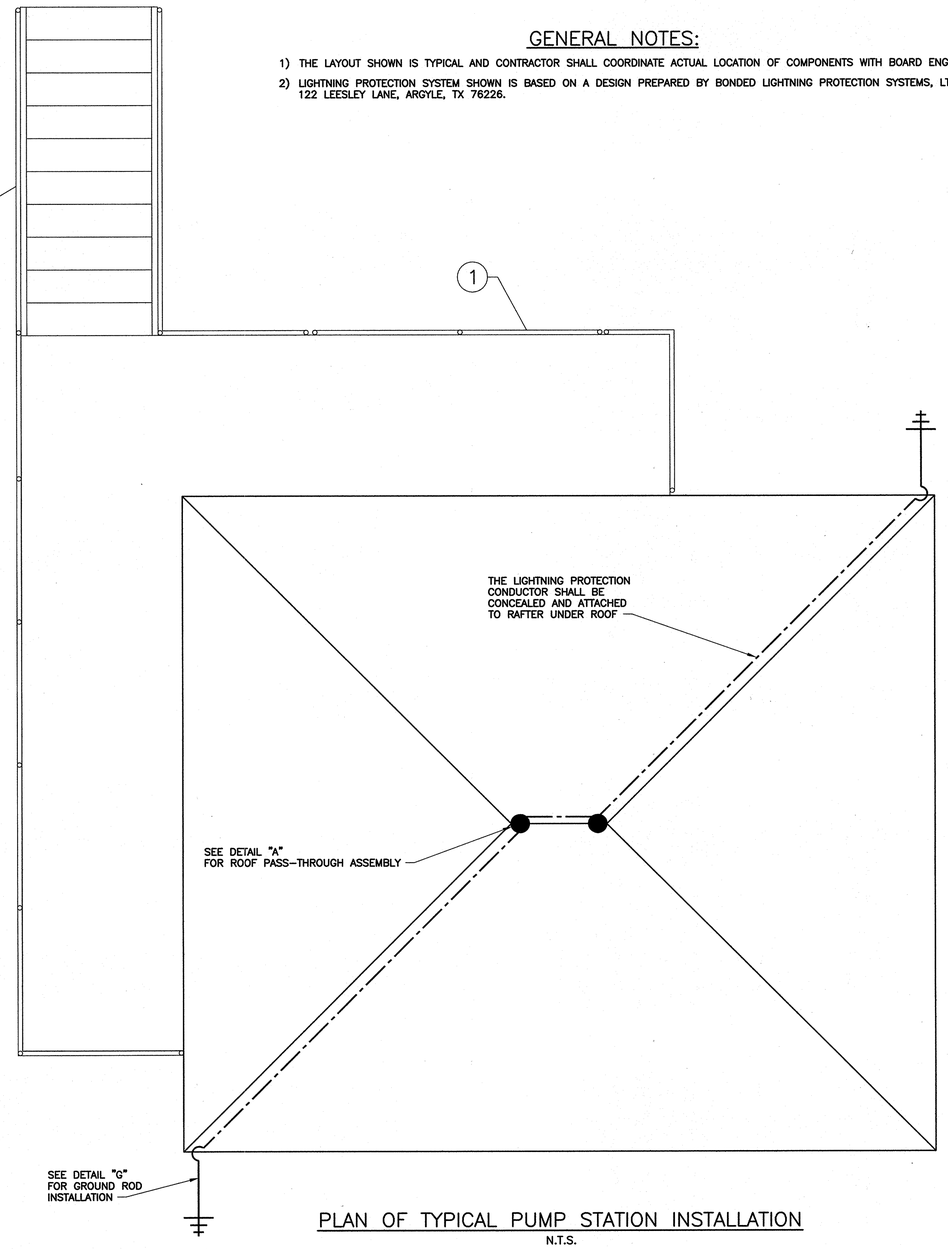
REBAR BOND DETAIL – 2



REBAR BOND DETAIL – 1

GENERAL NOTES:

1) THE LAYOUT SHOWN IS TYPICAL AND CONTRACTOR SHALL COORDINATE ACTUAL LOCATION OF COMPONENTS WITH BOARD ENGINEER.
2) LIGHTNING PROTECTION SYSTEM SHOWN IS BASED ON A DESIGN PREPARED BY BONDED LIGHTNING PROTECTION SYSTEMS, LTD., 122 LEESLEY LANE, ARGYLE, TX 76226.



PLAN OF TYPICAL PUMP STATION INSTALLATION
N.T.S.

SPECIFIC NOTES:

(1) LOWER ROOF IS UNDER ZONE OF PROTECTION CREATED BY HIGHER PROTECTED ROOFS.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
– · – · –	LIGHTNING PROTECTION CONDUCTOR
⊣⊢	GROUND ROD
●	AIR TERMINAL

Nestor James Houghton
REG. No. 22300
REGISTERED PROFESSIONAL ENGINEER
IN
ELECTRICAL ENGINEERING
STATE OF LOUISIANA
5/13

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

ELECTRICAL

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT 3668
HURRICANE KATRINA RELATED
404 HAZARD MITIGATION GRANT PROGRAM
REPLACEMENT OF VICTORIA SEWAGE PUMPING STATION

LIGHTNING PROTECTION PLAN AND DETAILS

DR. TH	
TRC. – –	
CK. DS	GENERAL SUPERINTENDENT
AP. NH	DWG. No. 5030-P7
SCALE: AS SHOWN	SET NO. / SHEET NO. 41
DATE: APRIL 2013	

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