

- NOTES:**
- THE CONSTRUCTION SITE IS NOT LOCATED IN A FEMA FLOOD HAZARDOUS ZONE.
 - FIRM # 370173117K, APRIL 3, 2006.
 - THERE ARE NO WETLANDS ON THE SITE.
 - THERE ARE NO EXISTING TREES ON THE SITE.
 - TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
 - IF THE CONTRACTOR DESIRES WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE FROM CAPE FEAR UTILITY AUTHORITY (CFUA) AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE METER BOX. ANY BACKFLOW PREVENTION DEVICES REQUIRED WILL NEED TO BE ON THE LIST OF DEVICES APPROVED BY USCFCCHR OR ASSE.
 - ANY IRRIGATION SYSTEM SUPPLY BY CFUA WATER SHALL COMPLY WITH THE CFUA CROSS CONNECTION CONTROL REGULATIONS.
 - CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING. 1-800-632-4949
 - THE BELLSOUTH CONTACT IS STEVE DAYVAULT. HE IS THE BUILDING INDUSTRY CONSULTANT (910) 392-8712. PLEASE CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.
 - ALL PLANTED AND RETAINED LIVING MATERIAL REQUIRED TO MEET THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, SHALL BE PERPETUALLY PROTECTED AND MAINTAINED TO PROFESSIONAL ACCEPTED STANDARDS BY JOINT AND SEVERAL RESPONSIBILITY OF THE OWNER, TENANT AND RESPECTIVE AGENTS OF THE PROPERTY ON WHICH THE MATERIAL IS LOCATED.
 - ANY PLANT MATERIAL THAT WAS PREVIOUSLY INSTALLED ON THE SITE TO MEET THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE THAT HAS NOT BEEN MAINTAINED MUST BE REPLACED.
 - AS PART OF THE FINAL ZONING INSPECTION FOR THIS PROJECT, A SURVEY OF THE SITE LANDSCAPING WILL BE CONDUCTED. PLANT MATERIAL THAT HAS NOT BEEN MAINTAINED MUST BE REPLACED BEFORE A FINAL ZONING APPROVAL IS ISSUED.
 - ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 - ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
 - A RAIN/FREEZE SENSOR SHALL BE INSTALLED AS PART OF ANY IRRIGATION SYSTEM USED ON THE SITE.
 - NOTIFY CITY OF WILMINGTON TRAFFIC ENGINEERING OFFICE 48 HOURS PRIOR TO ANY EXCAVATION WITHIN THE RIGHT-OF-WAY.
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
 - TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
 - CONTACT KAREN DIXON AT 910-341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
 - WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY (CFPUA) DETAILS AND SPECIFICATIONS.
 - ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCHR OR ASSE.
 - CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.
 - CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
 - UNDERGROUND FIRE LINE(S) MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPT. FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPT. DIVISION OF FIRE AND LIFE SAFETY AT 910-341-0696.
 - ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
 - TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING.
 - ANY BROKEN OR MISSING SIDEWALK PANELS WILL BE REPLACED.
 - PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910-343-3910 FOR INFORMATION.

SETBACKS	
REQUIRED	PROVIDED
FRONT - 0'	FRONT - 0'
SIDES - 0'	SIDES - 2.25' / 0.5'
REAR - 0'	REAR - 0'

WATER PROPOSED: 13,200 GPD
SEWER PROPOSED: 11,500 GPD

SITE DATA TABLE	
PIN	R04817-001-013-000
ADDRESS	225 GRACE ST
	WILMINGTON, NC 28401
ZONING	CENTRAL BUSINESS DISTRICT
ACREAGE	0.41
EX. BLDG & SIDEWALKS	0
EX. PARKING & DRIVES - TO BE REMOVED	14,489.2 SF = 0.33 AC
TOTAL EX. IMPERVIOUS - TO BE REMOVED	14,489.2 SF = 0.33 AC (80%)
PROPOSED ADDED GREENSPACE	451 SF = 0.01 AC
BUILDING IMPERVIOUS	12,292 SF = 0.28 AC (69%)
PARKING IMPERVIOUS	3,930 SF = 0.1 AC
SIDEWALK IMPERVIOUS	357 SF = 0.008 AC
PERVIOUS PAVEMENT (690.3SF-USE 40%)	276 SF = 0.01 AC
TOTAL PROPOSED IMPERVIOUS	16,855 SF = 0.4 AC (94%)
EXISTING PARKING - TO BE REMOVED	17 SPACES
PROPOSED ON-SITE PARKING	8 SPACES
SPACES LOST TO LANDSCAPING	0 SPACES
TOTAL PROP. PARKING ON SITE	8 SPACES
DISTURBED AREA	17,895 SF = 0.41 AC
CAMA LAND USE DESIGNATION	DEVELOPED
BUILDING HEIGHT	76'
NO. STORIES/FLOORS	5
1ST FLOOR (ENCLOSED) SF	9,895
2ND FLOOR SF	11,876
3RD FLOOR SF	11,876
4TH FLOOR SF	11,876
5TH FLOOR SF	11,876
TOTAL SF ON 5 FLOORS	57,399
NO. OF ROOMS / UNITS	92
USDA SOIL CLASSIFICATION - ENTIRE SITE	KUREB-URBAN LAND
SETBACK REQUIREMENTS	0 - ALL SIDES
OFF-SITE PARKING	CITY OF WILMINGTON PARKING DECK
FEMA FLOOD ZONE X	FEMA MAP PANEL 370173117K
CAPE FEAR RIVER BASIN	NORTHEAST CAPE FEAR RIVER, CLASS SC/SW

RECEIVED
NOV 20 2013
PLANNING DIVISION

GRACE ST.
66' PUBLIC RIGHT OF WAY

FINAL DESIGN
NOT FOR CONSTRUCTION

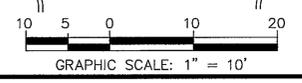
PLAN
JAI HOSPITALITY, LLC

WILMINGTON NEW HANOVER NORTH CAROLINA

HOLIDAY INN EXPRESS
SITE PLAN

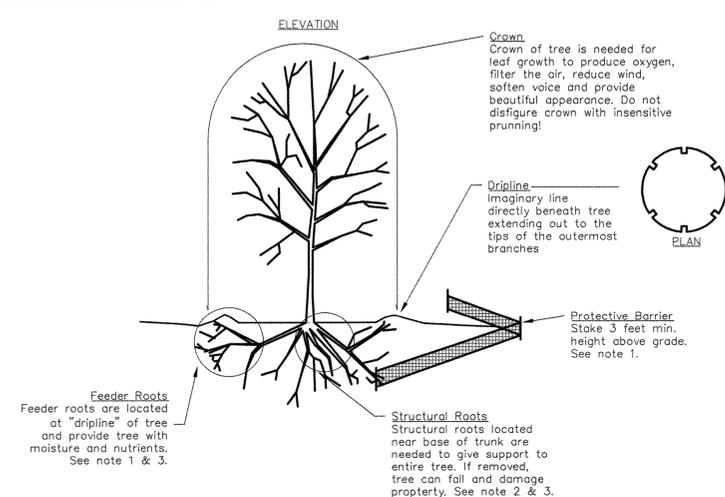
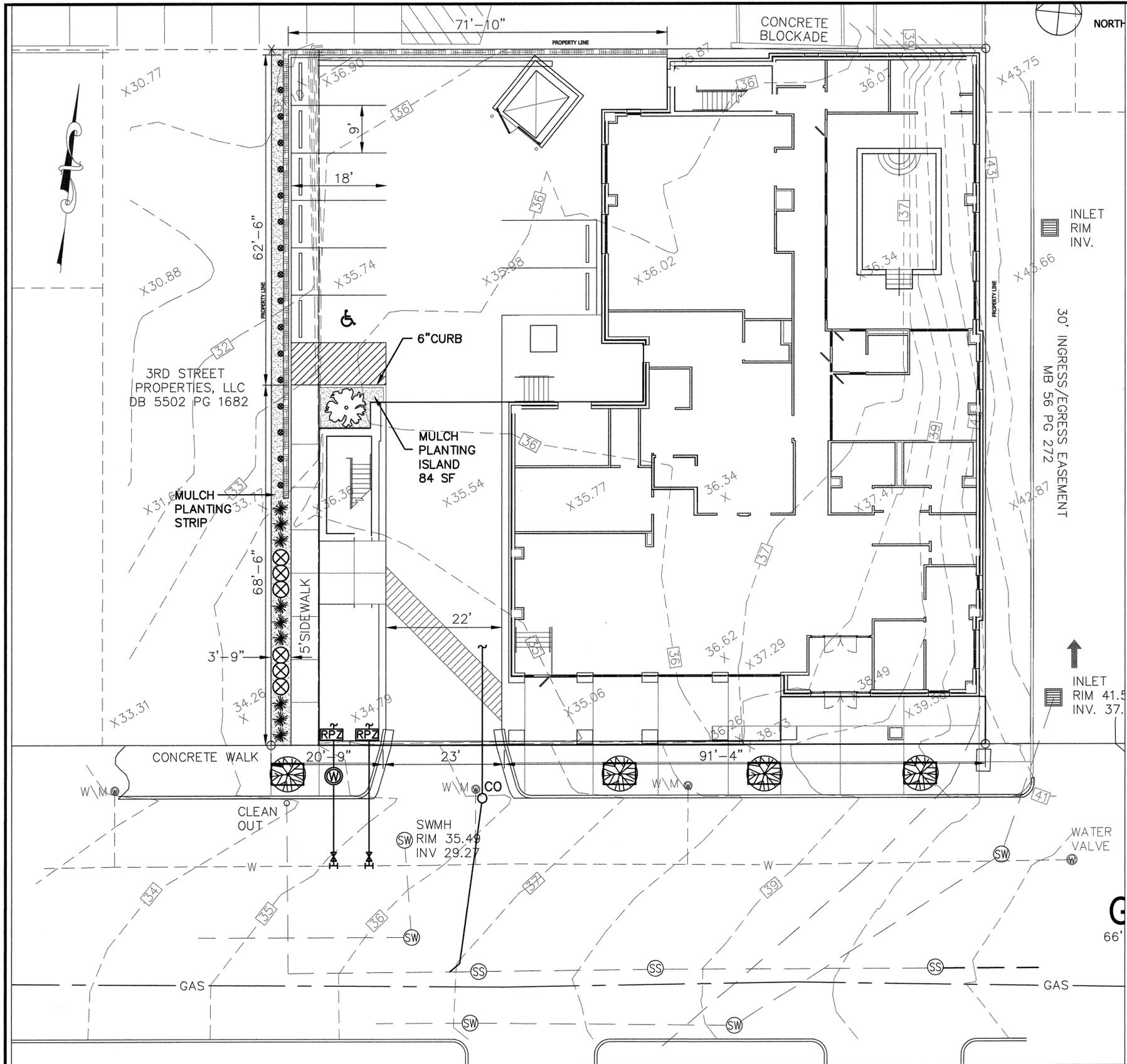
RIGHT ANGLE
ENGINEERING, P.C.
212 PRINCESS STREET
WILMINGTON, NC 28401
(910) 251-8544 FAX (910) 251-2208

OWNER: JAI HOSPITALITY / WILMINGTON HOTEL GROUP
7210 SADDLERACK STREET
KNOXVILLE, TN 37914
865-633-5100 X 151

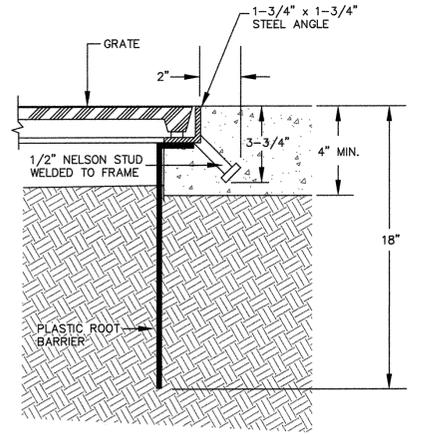


REV. NO.	DESCRIPTION	DATE

DATE: 11/12/2013
Scale: 1" = 10'
Drawn: NNC
Checked: WSL
Project No: MPD213
Sheet No: **C2**



- TREE PROTECTION DURING CONSTRUCTION**
1. CLEARLY MARK THE TREE TO BE SAVED PRIOR TO CONSTRUCTION AND ERECT A PROTECTIVE BARRIER AT THE DRIPLINE. DO NOT COMPACT SOILS BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO HEAVY MATERIALS SHALL BE STORED BENEATH TREES. RESULTS OF COMPACTION CAUSE WATER AND AIR NOT TO REACH THE ROOTS AND THE TREE WILL DIE. THESE "FEEDING ROOTS" OCCUR WELL AWAY FROM THE BASE OF THE TREE TO THE EDGE OF THE OVERHEAD BRANCH CANOPY. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. THE PROTECTIVE BARRIER SHOULD PREVENT DAMAGE FROM OCCURRING DURING CONSTRUCTION.
 2. NO CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK. REMOVAL OF THESE ROOTS ALONG ONE SIDE IS OFTEN DONE BECAUSE OF A WALK, PAVING OR BUILDING WHICH IS BEING CONSTRUCTED THESE ARE ESSENTIAL IN SUPPORTING THE TREE AND HOLDING IT UPRIGHT IN HIGH WINDS.
 3. AVOID CUT AND FILL WITHIN DIAMETER OF TREE CROWN DURING EXCAVATION.

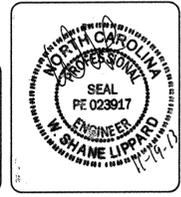


TREE GRATE FRAME INSTALLATION DETAIL
NOT TO SCALE

LANDSCAPE LEGEND			
SYMBOL	PLANT	SIZE/SPEC.	QUANTITY
●	FICUS PUMILA "CREEPING FIG"	MIN = 1 GALLON ● 5'-0" O.C.	17
✱	ABELIA x GRANDIFLORA	MIN = 12" ● 3'-0" O.C.	9
⊗	ILEX CRENATA "HELLER"	MIN = 12" ● 3'-0" O.C.	6
⊗	CREPE MYRTLE LAGERSTROEMIA INDICA UNIFORM COLOR "LIMBED UP" AS REQ.	MIN = 2.5" CALIPER MIN 25" O.C.	4
⊗	LOQUAT ERIOBOTRYA JAPONICA	MIN = 2.5" CALIPER	1
□	4' x 6' IRONSMITH TREE GRATE, "STARBURST" OR APPROVED EQUAL		4
■	HARDWOOD MULCH	MIN DEPTH = 4"	451.4 SF

FINAL DESIGN
NOT FOR CONSTRUCTION

PLAN
JAI HOSPITALITY, LLC
WILMINGTON NEW HANOVER NORTH CAROLINA

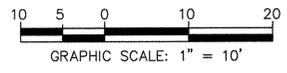


HOLIDAY INN EXPRESS
LANDSCAPE PLAN

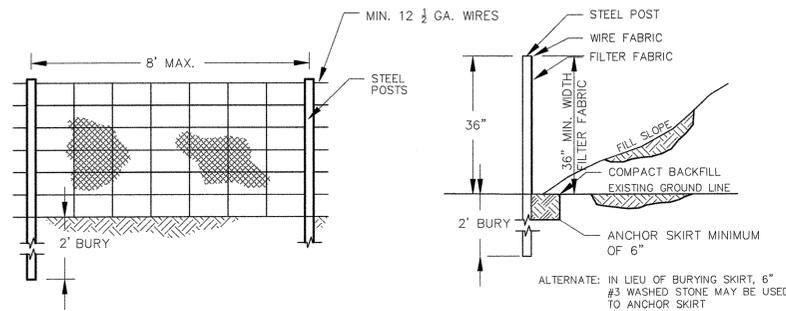
RIGHT ANGLE ENGINEERING, P.C.
212 PRINCESS STREET
WILMINGTON, NC 28401
(910) 251-8544 FAX (910) 251-2208

DATE: 11/12/2013
Scale: 1" = 10'
Drawn: NNC
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Sheet No: **L1**

OWNER: JAI HOSPITALITY / WILMINGTON HOTEL GROUP
7210 SADDLERACK STREET
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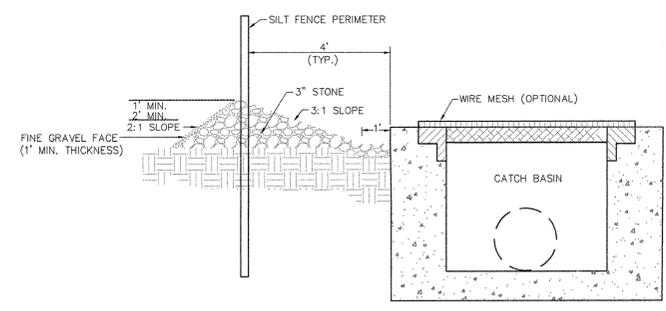
GENERAL NOTES:

FENCE FABRIC SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING. FILTER FABRIC SHALL BE MIRAFI 100 OR EQUIVALENT AND SHALL BE A MINIMUM OF 36" IN WIDTH. BURLAP CAN NOT BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS. STEEL POSTS SHALL BE 3'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE. SILT FENCES SHALL BE INSTALLED AROUND ALL CATCH BASINS. SILT FENCES SHALL BE PROVIDED AS NECESSARY TO PREVENT EXCESSIVE EROSION.

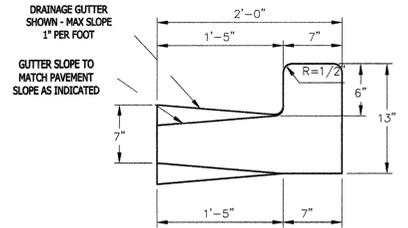
MAINTENANCE NOTES:

FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER GRADE, PREPARED AND SEEDED.

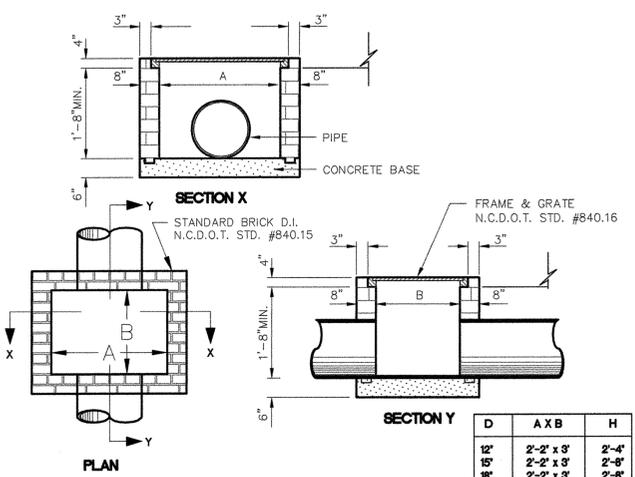
TEMPORARY SILT FENCE
NOT TO SCALE



GRAVEL DROP INLET PROTECTION (GRAVEL DONUT)
NOT TO SCALE



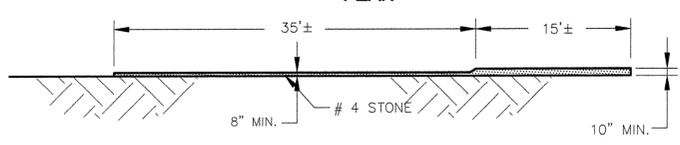
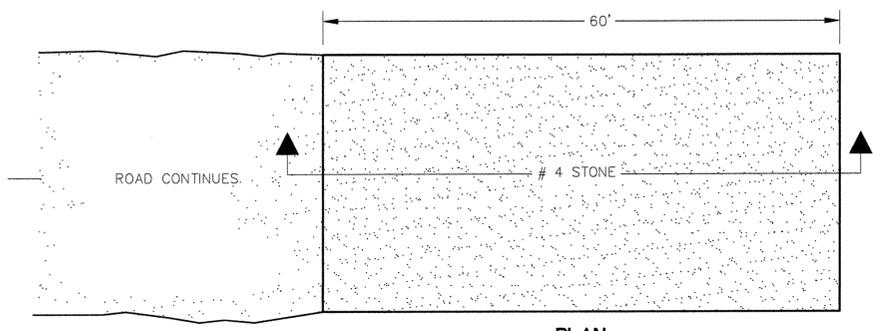
CONCRETE CURB AND GUTTER
NOT TO SCALE



CAST-IN-PLACE OR MASONRY CATCH BASIN
NOT TO SCALE

D	A X B	H
12'	2'-2" x 3'	2'-4"
15'	2'-2" x 3'	2'-8"
18'	2'-2" x 3'	2'-8"
24'	3' x 3'	4'-0"
30'	4' x 4'	4'-4"
36'	4' x 4'	5'-0"
42'	5' x 5'	5'-4"
48'	5' x 5'	6'-0"

- General Notes: Precast Catch Basins**
- Precast concrete structures shall be in accordance with NCDOT section 1077 for "precast concrete units" of the most recent "Standards Specifications for Roads and Structures" And ASTM-C-913 for "Reinforced Concrete Water and Wastewater Structures".
 - Concrete compressive strength shall be 4000 PSI Minimum and shall meet the requirements as specified in NCDOT section 1077.
 - Reinforcing steel shall be of deformed steel bars conforming to the requirements of ASTM-A-615, grade 60, or welded wire fabric conforming to the requirement of ASTM-A-82 or both.
 - Reinforcing steel design shall be according to C-890-78 for H-20-44 Loading.
 - Steps required on structures over 42" deep shall be on steel reinforced copolymer polypropylene plastic.
 - Section joints shall be sealed with butyl rubber sealant or NCDOT approved mortar at the option of the contractor.
 - Pipe connections shall be sealed with approved mortar. NCDOT approved brick may be used in conjunction with mortar at the contractors option.
 - Lift holes shall be located as required for handling and sealed after installation with NCDOT approved mortar.



TEMPORARY CONSTRUCTION ENTRANCE
SCALE: 1"=10'

TEMPORARY SEEDING

GRASS TYPE	AMOUNT/1000 SF	TIME OF SEEDING	INITIAL	FERTILIZATION/1000 SF MAINTENANCE
RYE GRAIN	1-2 LBS	NOV. THRU JAN.	25 LBS 10-10-10	N/A N/A N/A
BROWN TOP MILLET	1-2 LBS	JUNE THRU AUG.	25 LBS 10-10-10	N/A N/A N/A

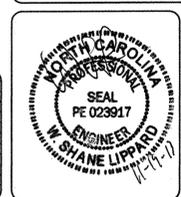
PERMANENT SEEDING

GRASS TYPE	AMOUNT/1000 SF	TIME OF SEEDING	INITIAL	FERTILIZATION/1000 SF MAINTENANCE
BERMUDA, COMMON	1-2 LBS	APR. THRU JUNE	25 LBS 10-10-10	MARCH-APRIL 12 LBS 10-10-10 EACH 4-8 WKS 1-2 LBS N. AUG- SEPT 12 LBS 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS	SEPT THRU OCT	25 LBS 10-10-10	FEB - MARCH 12 LBS 10-10-10 MAY & DEC 1/2 TO 1 LB. N. SEPT - OCT 12 LBS 10-10-10
SERICEA (SLOPES)	1-2 LBS	MARCH THRU APR.	25 LBS 10-10-10	FEB - MARCH 1/2 TO 1 LB. N. N/A

REV. NO.	DESCRIPTION	DATE

FINAL DESIGN NOT FOR CONSTRUCTION

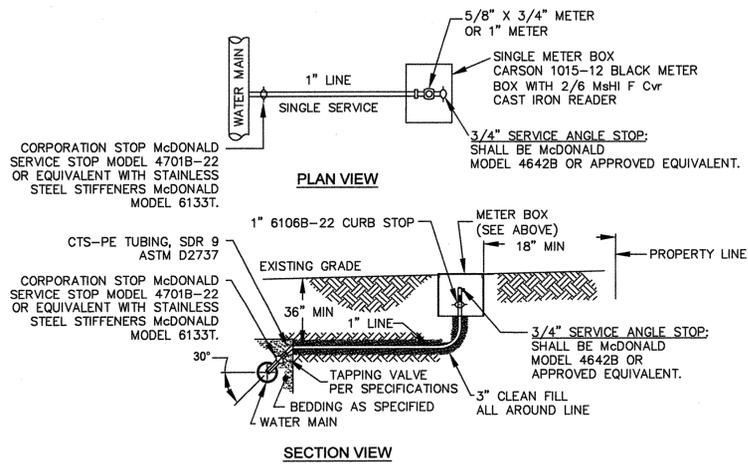
PLAN
JAI HOSPITALITY, LLC
WILMINGTON NEW HANOVER NORTH CAROLINA



HOLIDAY INN EXPRESS
DETAILS

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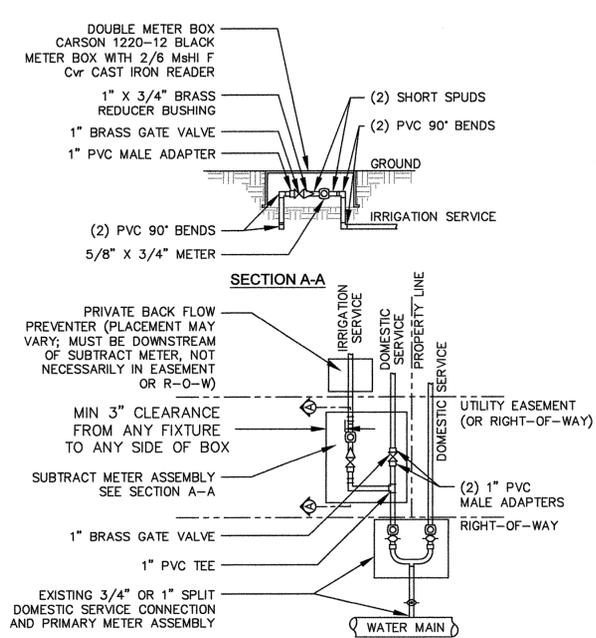
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Project No: MP0213
Sheet No: **D2**



SINGLE SERVICE CONNECTION

TYPICAL WATER SERVICE CONNECTION FOR RESIDENTIAL SINGLE FAMILY HOME ON CFPWA WATER SYSTEM
NOT TO SCALE

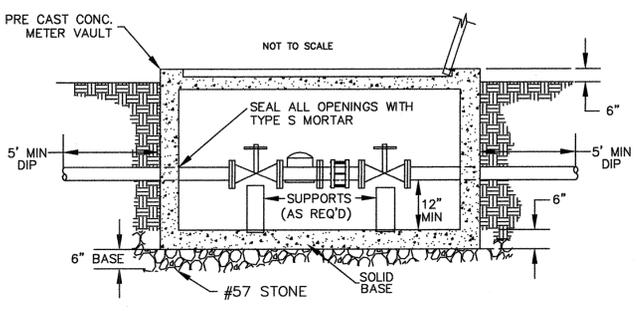
- NOTES:**
- NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY; SADDLE McDONALD 3801 OR EQUIVALENT.
 - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (SIP MODEL 4240 OR APPROVED EQUIVALENT)



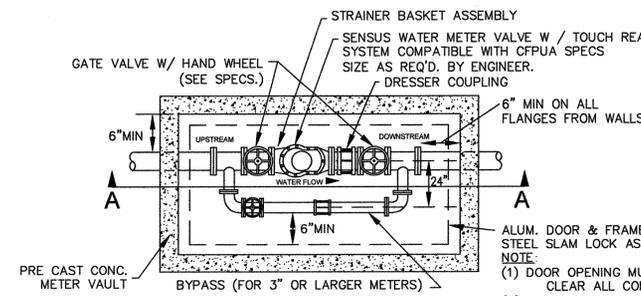
DOUBLE SERVICE CONNECTION USING SUBTRACT METER

(MULTIPLE DOMESTIC SERVICES PER TAP)
NOT TO SCALE

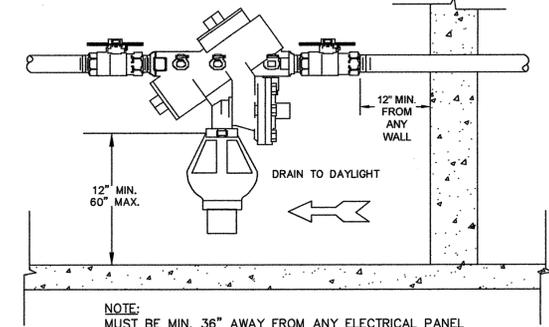
- NOTES:**
- BEYOND THE PRIMARY DOMESTIC METER ASSEMBLY, CFPWA IS ONLY RESPONSIBLE FOR METER AND WASHERS OF SUBTRACT METER ASSEMBLY
 - ALL PIPE AND FITTINGS UP TO FINAL SERVICE LINE TO BE 1" EXCLUDING METERS



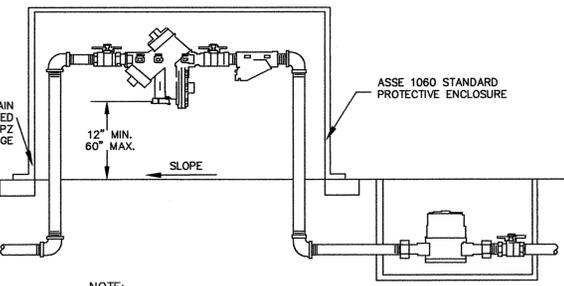
METER VAULT SECTION A-A



WATER METER VAULT FOR WATER METERS LARGER THAN 2"



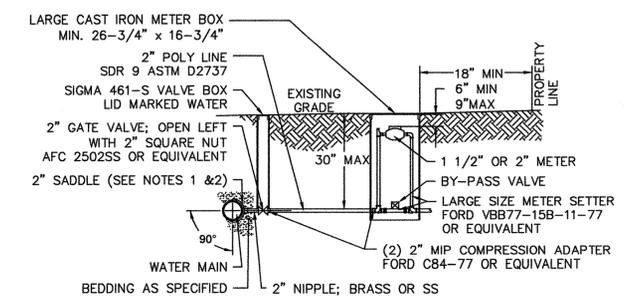
INDOOR HORIZONTAL INSTALLATION



INDOOR VERTICAL INSTALLATION

REDUCED PRESSURE PRINCIPLE ASSEMBLY

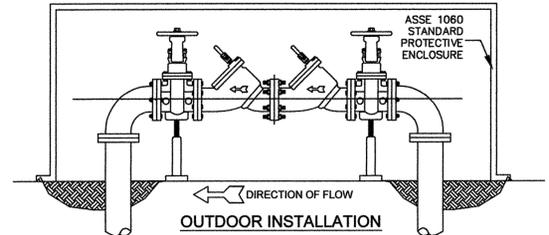
REV:	DESCRIPTION:	DATE:
1	Single Service Connection, Double Service Connection, and Large Meter Revised	10/26/12



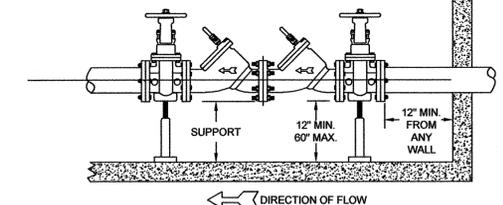
LARGE METER

FOR 1 1/2" OR 2" WATER SERVICES
NOT TO SCALE

- NOTES:**
- ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY; McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
 - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (OLDCASTLE PRECAST MODEL B1730 OR APPROVED EQUIVALENT).
 - METER BOXES SUSCEPTIBLE TO INCIDENTAL, NON-DELIBERATE TRAFFIC SHALL CONFORM TO ANSI/SCIE 77 TIER 15 LOAD RATING STANDARDS (SYNERTECH MODEL DUO 17x30 OR APPROVED EQUIVALENT).
 - NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
 - 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.



OUTDOOR INSTALLATION



INDOOR INSTALLATION

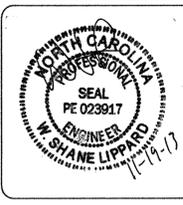
DOUBLE CHECK VALVE ASSEMBLY

GENERAL NOTES:

- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
- THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
- THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN & STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

THE DETAILS SHOWN HEREON SUPERCEDE CFPWA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

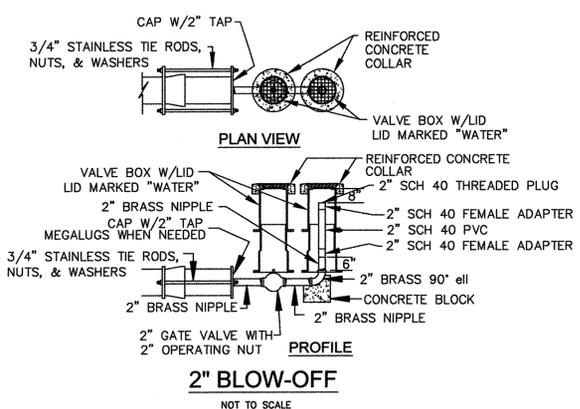
CFPUA WATER DISTRIBUTION SYSTEM



STANDARD DETAILS

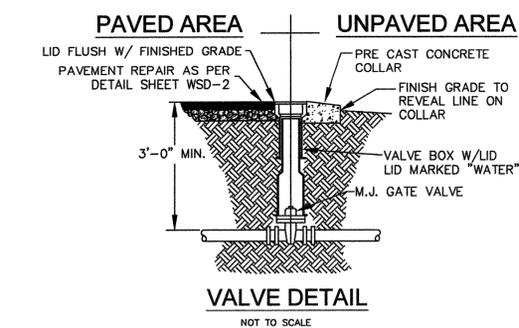
CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6500

DATE: 1/9/12
SCALE: N/A
DRAWN BY: CFPWA
CHECKED BY: CFPWA
PROJECT NO.:
SHEET NO: WSD-1



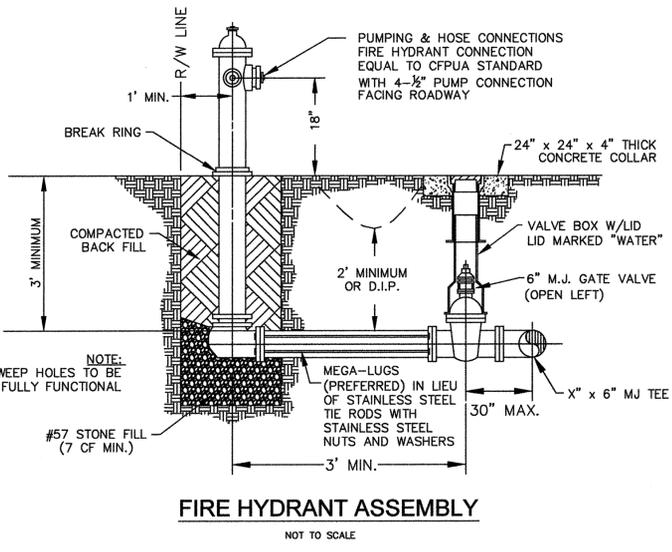
2" BLOW-OFF

NOT TO SCALE



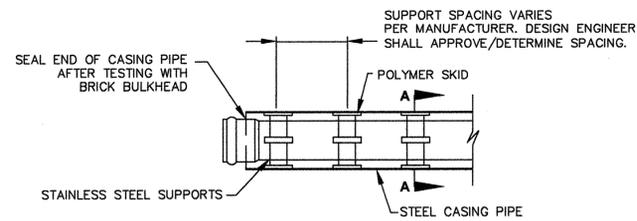
VALVE DETAIL

NOT TO SCALE



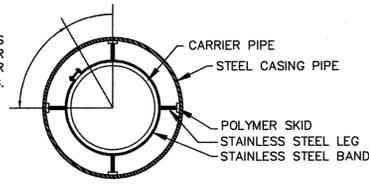
FIRE HYDRANT ASSEMBLY

NOT TO SCALE



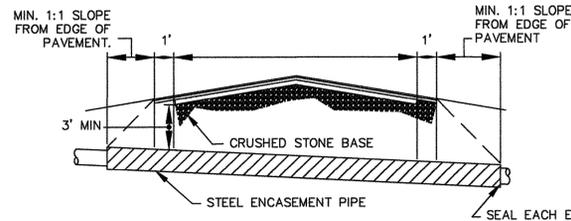
NOTE: PIPE SUPPORT TO BE PLACED TO PROVIDE PROPER SUPPORT, ALIGNMENT, AND GRADE AS SPECIFIED. CONTINUOUS SUPPORTS MAY BE USED AS ALTERNATIVE. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.

SKID SPACING AND LEG SIZE VARIES BY PIPE SIZE AND PER MANUFACTURER. DESIGN ENGINEER SHALL APPROVE/DETERMINE SPACING.



SECTION A-A
NOT TO SCALE
PIPE CASING SUPPORT DETAIL
NOT TO SCALE

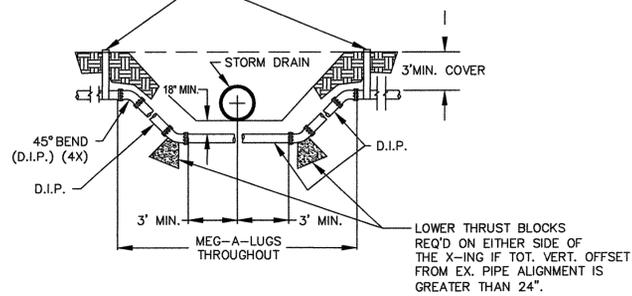
NOTE: PAVEMENT WIDTH AND LOCATION IN R/W VARIES. SEE PLAN FOR INDIVIDUAL LOCATION.



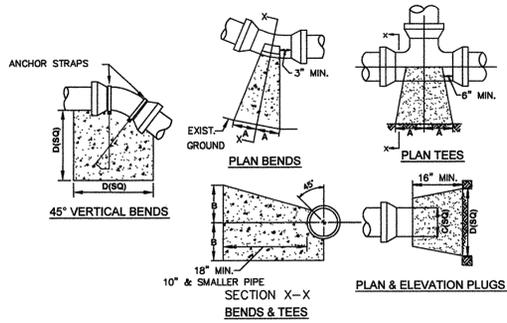
NOTES:
1. CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PROFILE FOR EACH CROSSING. BORING/JACKING TO LINE AND GRADE IS REQUIRED.
2. TRACER WIRE SHALL BE CONTINUED THROUGH CASING

TYPICAL BORING/JACKING DETAIL
NOT TO SCALE

GATE VALVES REQ'D ON EITHER SIDE OF THE X-ING IF TOT. VERT. OFFSET FROM EX. PIPE ALIGNMENT IS GREATER THAN 24".



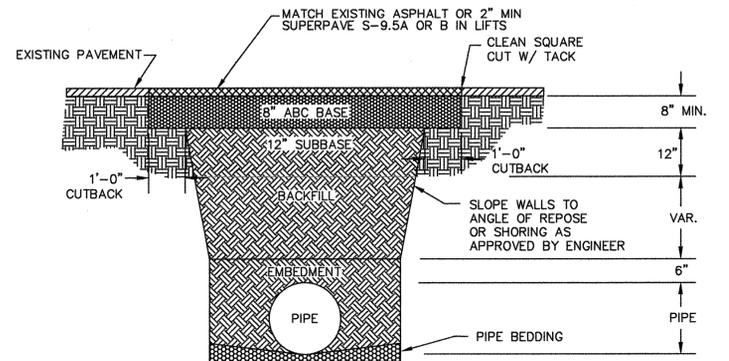
NOTE: USE D.I.P. (CL50 OR BETTER)
WATER MAIN DITCH & STORM DRAIN CROSSING
NOT TO SCALE



SIZE	90° BENDS		45° BENDS		22 1/2° BENDS		TEES/PLUGS		45° VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

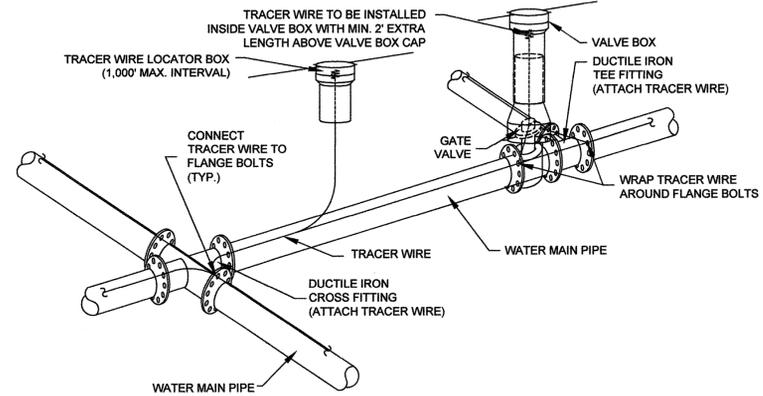
NOTES: 1. BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
3. USE MEG-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND RODDING.

THRUST BLOCK DETAIL
NOT TO SCALE



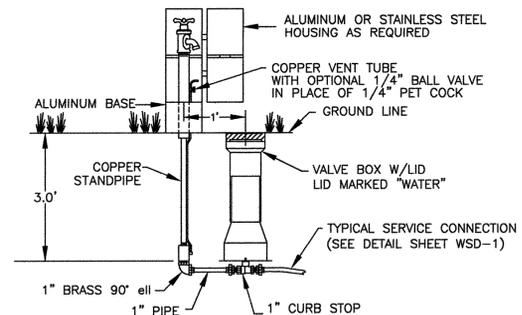
NOTES:
1. BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
3. 8-INCH ABC BASE MATERIAL SHALL BE USED ON CITY STREETS.
4. BACKFILL AND BASE MATERIALS SHALL BE COMPACTED 12" MINIMUM LIFTS
5. SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E. JUMPING JACK), HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
6. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
7. ABC BASE AND SUBBASE COMPACTED TO 98% AND BACKFILL AND EMBEDMENT COMPACTED TO 90% AS DETERMINED BY THE MODIFIED PROCTOR AASHTO METHOD T-99.
8. 1-FOOT CUTBACKS OF ASPHALT SHALL BE PREPARED ON UNDISTURBED SOIL. MINIMUM ASPHALT DENSITY IS 90%.

PAVEMENT REPAIR WHERE PIPE INSTALLED
(FOR PRIVATE ROADS AND PAVED AREAS;
CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY
RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)
NOT TO SCALE

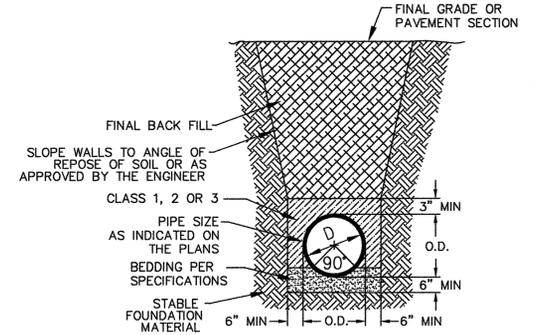


NOTES:
1. TRACER WIRE SHALL BE #10 COPPER SOLID CORE COPPER WIRE WITH GAS AND OIL RESISTANT INSULATION
2. WIRE SHALL BE STRAPPED TO ALL PVC WATER MAIN PIPING WITH DUCT TAPE AT 12-FT. INTERVALS.
3. SECURE WIRE TO ALL TEE AND CROSS FITTINGS.
4. ALL WIRE SPLICES SHALL HAVE WATER PROOF WIRE CONNECTIONS.

TRACER WIRE DETAIL



SAMPLING STATION
NOT TO SCALE



**CL 50 DUCTILE IRON
DR 18 PVC PIPE TRENCH DETAIL**
NOT TO SCALE

GENERAL NOTES:

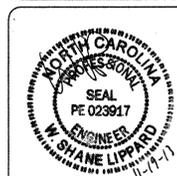
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
- THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
- THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN & STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

**THE DETAILS SHOWN HEREON SUPERCEDE CFPWA
WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

CFPUA WATER DISTRIBUTION SYSTEM

DATE:
1/9/12
SCALE:
N/A
DRAWN BY:
CFPUA
CHECKED BY:
CFPUA
PROJECT NO.:

STANDARD DETAILS



CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

SHEET NO:
WSD-2

REV:	DESCRIPTION:	DATE:

Stewardship. Sustainability. Service.