

GENERAL NOTES

CONTRACTOR IS RESPONSIBLE FOR FIELD LAYOUT AND SHOP DETAILING. THE CONTRACTOR MUST VERIFY AND COORDINATE DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PROMPTLY. CONTRACTOR SHALL NOT PROCEED WITH FABRICATION, ERECTION AND CONSTRUCTION OF THAT PORTION OF THE PROJECT PRIOR TO RESOLVING DISCREPANCIES FROM THE ENGINEER. THE CONSTRUCTION DOCUMENTS ARE PREPARED BASED UPON THE STRUCTURE COMPLETED CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THE STRUCTURAL STABILITY AT ALL INTERMEDIATE STAGES OF THE STRUCTURE DURING CONSTRUCTION PROCESS.

CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY, UNLESS BY REVIEW OF SHOP DRAWINGS OR PERIODIC OBSERVATIONS OF CONSTRUCTION FOR:

- 1) FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 2) FIELD LAYOUT, SHOP DETAILING, VERIFYING, AND COORDINATING DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- 3) DIMENSIONS TO BE CONFIRMED AND COORDINATED ON THE JOB SITE AND BETWEEN INDIVIDUAL DRAWINGS OR SETS OF DRAWINGS.
- 4) FABRICATION PROCESSES, MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION, INCLUDING EXCAVATION, SHORING, SCAFFOLDS, TEMPORARY BRACING, TEMPORARY CLIPS, AND LUGS, ERECTION, TEMPORARY STRUCTURAL MEMBERS REQUIRED FOR SAFE ERECTION PROCEDURES, FORM WORK, AND ETC.
- 5) COORDINATION OF THE WORK OF ALL TRADES, SAFE WORKING CONDITIONS ON THE JOB SITE, AND COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL CODE REQUIREMENTS INCLUDING OSHA REQUIREMENTS.

CONTRACTOR SHALL REPORT ANY VARIATION IN THE FIELD CONDITIONS RELATIVE TO THE CONTRACT DOCUMENTS TO THE ENGINEER PROMPTLY AND WORK SHALL NOT PROGRESS UNTIL WRITTEN PERMISSION IS OBTAINED FROM THE ENGINEER.

DESIGN CRITERIA

- 1) BUILDING CODE: 1999 BOCA BUILDING CODE
- 2) DESIGN LOADS:
 - A. TRUCK LOADING: HS-20

EXISTING CONDITIONS

- 1) THE EXISTING CONDITIONS SHOWN IN THE CONSTRUCTION DOCUMENTS ARE FOR ASSISTING CONTRACTORS TO UNDERSTAND THE SCOPE OF WORK. THEY ARE PREPARED BASED ON THE INFORMATION FURNISHED TO THE ENGINEER AND MAY NOT REFLECT THE TRUE AS-BUILT CONDITION.
- 2) CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR FIELD VERIFYING ALL EXISTING CONDITIONS, SOUNDNESS OF EXISTING STRUCTURE, ALL PERTINENT DIMENSIONS AND ELEVATIONS. CONTRACTOR SHALL FURNISH THE VERIFIED INFORMATION TO THE ENGINEER PROMPTLY FOR PROJECT COORDINATION.
- 3) CONTRACTORS TO PROVIDE ALL SHORING, BRACING, AND REINFORCING, TEMPORARY AND PERMANENT, AS REQUIRED TO RENDER EXISTING STRUCTURE TO REMAIN SOUND AND SAFE.

SPECIAL INSPECTIONS

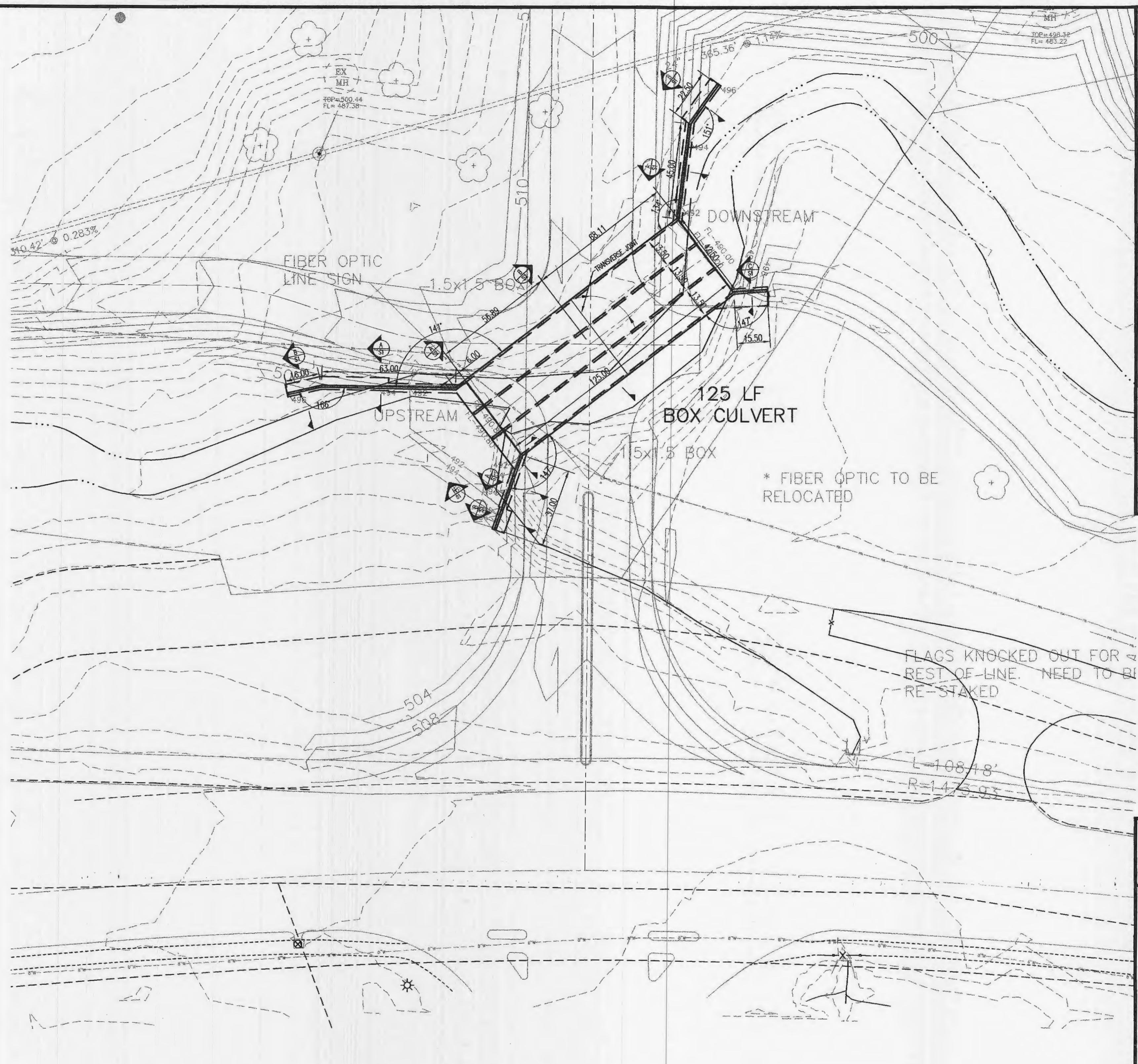
- 1) CONTRACTOR IS RESPONSIBLE FOR THE COSTS OF HAVING SPECIAL INSPECTIONS COMPLETED BY AN APPROVED AND QUALIFIED INSPECTION OR TESTING AGENCY.
- 2) SPECIAL INSPECTIONS SHALL BE PERFORMED PER CHAPTER 17 OF THE IBC 2000 CODE.
- 3) THE TESTING AGENCY SHOULD BE ACCEPTABLE TO OWNER.
- 4) INSPECTION SHALL BE PERFORMED ON THE FOLLOWING AND ADDITIONAL INSPECTIONS REQUIRED BY THE BUILDING CODE:
 - 1) FIELD INSPECTION OF CONCRETE
 - 2) REINFORCING PLACEMENT, CONCRETE PLACING AND CONCRETE CURING METHODS.
 - 3) CONCRETE FORM WORK FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND ACI 318-99 SECTION 7.4, 7.5, 7.6, 7.7.
 - 3) DURING CONSTRUCTION THE FOLLOWING INSPECTIONS SHALL BE MADE:
 - a. EVALUATION OF CONCRETE STRENGTH (ACI 318 SECTION 5.6)
 - b. INSPECTION FOR PROPER MIX PROPORTIONS AND MIXING (ACI 318 CHAPTER 4, AND SECTIONS 5.2, 5.3, 5.4, AND 5.8)
 - c. INSPECTION FOR PROPER PLACING TECHNIQUES (ACI SECTIONS 5.9 AND 5.10)
 - d. INSPECTION FOR MAINTENANCE OF PROPER CURING TEMPERATURES AND TECHNIQUES (ACI SECTIONS 5.11, 5.12, 5.13)

FOUNDATIONS: SOIL CONDITION AND PREPARATION

- 1) ALL UNSUITABLE SOIL AND EXISTING FILL SHALL BE REMOVED AND BACKFILLED WITH ENGINEERED FILL IN ACCORDANCE WITH COMMON ENGINEERING PRACTICES AND VERIFIED AT THE SITE BY A QUALIFIED GEOTECHNICAL ENGINEER.
- 2) FOOTINGS HAVE BEEN PROPORTIONED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF AND SHALL BE VERIFIED AT THE SITE BY A QUALIFIED GEOTECHNICAL ENGINEER BEFORE ANY FOUNDATION WORK BEGINS.
- 3) BOTTOM OF FOOTINGS MUST EXTEND 1'-6" BELOW PRESENT GRADE OR INTO "ENGINEERED FILL" AND 2'-6" BELOW PROPOSED GRADE AND MUST BE ON UNDISTURBED SOIL OR "ENGINEERED FILL".

CONCRETE

- 1) STANDARDS:
 - A. ACI 318-99 BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE
 - B. ACI 301-96 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
 - C. ACI 315-92 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT
 - D. ACI 347R-94 GUIDE TO FORM WORK FOR CONCRETE
 - E. ACI 304R GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE
 - F. ACI 308R-96 GUIDE FOR CONSOLIDATION OF CONCRETE
 - G. ACI 309-92 STANDARD PRACTICE FOR CURING CONCRETE
 - H. ACI 306R-88 COLD WEATHER CONSTRUCTION
 - I. ACI 305R-91 HOT WEATHER CONSTRUCTION
 - J. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE
- 2) ALL DETAILING, FABRICATION, AND ERECTION FOR REINFORCING BARS AND THEIR SUPPORT IN THE FORMS WITH ACCESSORIES MUST FOLLOW THE ACI DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI 315-92).
- 3) MINIMUM CLEAR COVER OVER REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS, UNLESS NOTED OTHERWISE:
 - A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH, SUCH AS BOTTOM AND SIDES OF FOOTINGS: _____"
 - B. CONCRETE EXPOSED TO EARTH OR WEATHER, SUCH AS TOP OF FOOTINGS, FORMED FOUNDATION STEM WALLS, AND EXTERIOR FACE OF CONCRETE WALLS: _____"
- 4) THE MINIMUM CLEAR COVER REQUIREMENTS APPLIES TO THE LONGITUDINAL FACE OF THE REINFORCEMENT AS WELL AS THE ENDS OF THE REINFORCEMENTS.
- 5) ALL POURED IN PLACE CONCRETE SHALL BE READY-MIXED AND HAULED IN ACCORDANCE WITH ASTM C94 WITH DELETION OF REFERENCE FOR ALLOWING ADDITIONAL WATER TO BE ADDED TO BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP. ADDITION OF WATER TO THE BATCH WILL NOT BE PERMITTED.
- 6) ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE UNLESS NOTED OTHERWISE.
- 7) PREPARE CONCRETE DESIGN MIXES FOR EACH TYPE AND STRENGTH OF CONCRETE BY LABORATORY TRIAL BATCH METHOD AS SPECIFIED IN ACI 301 AND ACI 318. USE AN INDEPENDENT TESTING FACILITY ACCEPTABLE TO ENGINEER FOR PREPARING AND REPORTING PROPOSED MIX DESIGNS. THE TESTING FACILITY SHALL NOT BE THE ONE USED FOR FIELD QUALITY CONTROL TESTING, UNLESS ACCEPTABLE TO ENGINEER. SUBMIT CONCRETE MIX DESIGNS AND WRITTEN TEST REPORTS OF EACH PROPOSED MIX OF CONCRETE TO ENGINEER AT LEAST FIFTEEN (15) DAYS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER.
- 8) ALL CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS AND MEET FOLLOWING REQUIREMENTS:
 - A. A MINIMUM OF 6 SACKS OF CEMENT PER CUBIC YARD.
 - B. MAXIMUM WATER-CEMENTitious MATERIALS RATIO NOT TO EXCEED 0.40
 - C. USE WATER-REDUCING ADMIXTURE IN CONCRETE PER ASTM C494 TYPE A OR D AS REQUIRED FOR PLACEMENT AND WORKABILITY.
 - D. CONCRETE SLUMP AT POINT OF PLACEMENT TO BE NOT LESS THAN 2" AND NOT GREATER THAN 4"
 - E. USE AIR-ENTRAINING ADMIXTURES IN CONCRETE PER ASTM C250, CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER REQUIRED ADMIXTURES.
 - F. ADD AIR-ENTRAINING ADMIXTURES AT MANUFACTURER'S PRESCRIBED RATE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING FOLLOWING LISTED TOTAL AIR CONTENTS:
 - 1. ALL CONCRETE EXPOSED TO EARTH OR WATER, SUCH AS CONCRETE FOR ALL FOUNDATION WORK, EXTERIOR WALLS AND EXTERIOR FLAT WORK: _____% ± 1.5%
- 9) PORTLAND CEMENT SHALL BE ASTM 150, TYPE I.
- 10) FINE AGGREGATE SHALL BE CLEAN, HARD, DURABLE AND FREE OF DELETERIOUS SUBSTANCES AND CONFORM TO ASTM C33.
- 11) COARSE AGGREGATE SHALL BE CLEAN, HARD AND DURABLE WITHOUT FLAT OR ELONGATED PIECES AND SHALL CONFORM TO ASTM C33.
- 12) WATER SHALL BE POTABLE.
- 13) FORMS SHALL BE PLYWOOD IN GOOD CONDITION. APPLY A FORM RELEASE AGENT TO ALL FORMS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 14) MAKE ONE SET OF FOUR CYLINDERS FOR EACH MAJOR POUR OR EACH 50 CUBIC YARDS. TEST ONE AT 7 DAYS AND TWO AT 28 DAYS PER ASTM C39. KEEP ONE IN RESERVE. ALL TESTS PAID BY CONTRACTOR. SUBMIT ALL TEST REPORTS TO THE ENGINEER.
- 15) MILL TEST REPORTS FOR REINFORCING BARS AND CEMENT ARE ACCEPTABLE.
- 16) REINFORCING BARS ARE TO BE ASTM A615-GRADE 60 UNCOATED DEFORMED STEEL, U.L.O.
- 17) THE CIVIL AND STRUCTURAL DRAWINGS MUST BE REFERRED TO FOR ALL REQUIREMENTS, AND THE VARIOUS TRADES ARE RESPONSIBLE FOR THE PLACING OF SLEEVES, OUTLET BOXES, ANCHORS, ETC., THAT MAY BE REQUIRED.
- 18) DOWELS MUST BE IN POSITION BEFORE PLACING CONCRETE, PUSHING BARS INTO FRESHLY POURED CONCRETE IS NOT ACCEPTABLE.
- 19) ALL BARS SHALL LAP A MINIMUM OF 48 BAR DIAMETERS WITH 2'-0" MINIMUM LAP. ANY BAR SPLICE OTHER THAN WHAT'S SHOWN ON PLANS MUST HAVE PRIOR APPROVAL OF THE ENGINEER.
- 20) PROVIDE THE FOLLOWING ADDITIONAL REINFORCING UNLESS OTHERWISE CALLED FOR ON STRUCTURAL PLANS:
 - A. CORNER BARS AT ALL CORNERS AND INTERSECTIONS OF CONCRETE WALLS, GRADE BEAMS, AND FOOTINGS TO MATCH HORIZONTAL REINFORCING.
- 21) BOX CULVERT CONCRETE WALLS SHALL HAVE CONSTRUCTION JOINTS NOT FURTHER THAN 65'-0" APART. RETAINING WALL CONSTRUCTION EXPANSION JOINTS SHALL BE AT ALTERNATE 30'-0" O.C.
- 22) REINFORCING SUPPLIER, DETAILER AND CONTRACTOR SHALL COORDINATE AND FURNISH ALL REINFORCING SUPPORTS DURING CONSTRUCTION (I.E. STANDEES, TIES, ETC. TO SECURE REINFORCING FOR PLACING CONCRETE)
- 23) ALL WATERSTOPS SHALL BE 6" PVC DOUBLE BULB TEE CONSTRUCTION UNLESS NOTED OTHERWISE.
- 24) ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4".



NOTE:
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NO.	DATE	REVISIONS	ISSUE / REVISION DESCRIPTIONS

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DATE: 1/4/2008
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SCALE: 1" = 1'

PRELIMINARY
GENERAL NOTES
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NOTES:
CONTRACTOR TO COMPLY WITH ALL GOVERNING REGULATIONS AND REQUIREMENTS INCLUDING OSHA REGULATIONS 29 CFR PART 1926 FOR CONSTRUCTION INDUSTRY.

NOTES:
THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING FABRICATION, TECHNIQUES, AND SAFETY AT THE CONSTRUCTION SITE. THE CONTRACTOR IS RESPONSIBLE FOR DESIGN AND INSTALLATION OF ALL TEMPORARY SHORING, BRACING, BOLTING, WELDING, LUGS, SEAT ANGLES, ETC., TO SAFELY CONSTRUCT THE PROJECT. THE CONTRACTOR IS TO COORDINATE BETWEEN DISCIPLINES AND BRING ANY DISCREPANCY TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.

NOTES:
THE STRUCTURAL DRAWINGS ARE NOT A SET OF STAND ALONE CONSTRUCTION DOCUMENTS. THESE STRUCTURAL DRAWINGS MUST ONLY BE USED IN CONJUNCTION WITH OTHER RELATED DISCIPLINES. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND COORDINATE BETWEEN DISCIPLINES. ANY DISCREPANCY BETWEEN THE DRAWINGS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION PRIOR TO FABRICATION OR CONSTRUCTING THAT PORTION OF THE STRUCTURE.

NOTES:
FEMA BENCHMARK
RANCO - ELEVATION (NGVD) 400.00 2' HIGH CAST CONCRETE ON CENTER OF NORTH END OF WALKWAY AT THE NORTHEAST CORNER OF BELLEAU CREEK ROAD BRIDGE OVER BELLEAU CREEK
SITE BENCHMARK
ELEV. -488.67 TOP OF EXISTING MANHOLE ON EASTERN PROPERTY LINE.