

STORM DRAIN

2'-0"

- 2'-0" SQR.

CATCH BASIN

LINE

PRECAST CONCRETE

IS AN ACCEPTABLE ALTERNATIVE

16,000 LB. UNIFORM LOAD CAPACITY.

AS MANUFACTURED BY:

GRATEMASTER INC.

OR APPROVED EQUAL

FLEXIBLE COUPLER

300 S. DAYTON ST.

DAVISON MI 48423

OR APPROVED EQUAL

1-800-521-1283

AS MANUFACTURED BY:

HILLSBORO, OR

(503) 647-2050

FERNCO

DIVISION 2 -SITE WORK

SECTION INCLUDES EXCAVATION, EMBANKMENT, BEDDING, BACKFILL AND MATERIALS FOR STRUCTURES, PAVEMENTS AND STORM DRAINS SPECIFIED OR SHOWN ON PLANS.

QUALITY ASSURANCE EARTHWORK TESTING - GENERAL CONTRACTOR TO ARRANGE AND OWNER TO PAY FOR EARTHWORK TESTING BY MATERIALS TESTING LABORATORY REGULARLY ENGAGED TO

PERFORM THE WORK REQUIRED.

SUBMITTALS

SUBMIT SIEVE ANALYSIS REPORT OF STRUCTURAL BACKFILL MATERIAL AND TRENCH AGGREGATE BACKFILL MATERIAL TO OWNER AND ENGINEER FOR APPROVAL SUBMIT TEST RESULTS OF COMPACTION TO OWNER AND ENGINEER.

EXCAVATION GENERAL

EXCEPT WHEN SHOWN OR SPECIFIED OTHERWISE, EXCAVATION INCLUDES REMOVAL OF MATERIALS OF ANY NATURE ENCOUNTERED, INCLUDING OBSTRUCTIONS THAT WOULD INTERFERE WITH THE EXECUTION OF THE WORK. REMOVE MATERIALS TO LINES AND GRADES SHOWN OR ORDERED. FURNISH, PLACE AND MAINTAIN SUPPORTS AND SHORING REQUIRED FOR THE SIDES OF EXCAVATIONS, AND PUMPING OR DITCHING MEASURES FOR THE REMOVAL OR EXCLUSION OF WATER, INCLUDING STORM WATER AND WASTE WATER REACHING THE SITE WHICH WOULD DAMAGE WORK.

STRIP GROUND SURFACE UNDER STRUCTURES, PAVEMENTS, AND SIDEWALKS OF GRASS, ROOTS AND ORGANIC MATERIAL TO A DEPTH OF THE ORIGINAL GROUND SURFACE ROOT ZONE BELOW ANY FILL SOIL OVERLAYING THE SITE. GENERALLY A MINIMUM DEPTH OF 4 INCHES IS REQUIRED.

DISPOSE OF STRIPPINGS OFF SITE OR AS DIRECTED BY OWNER. **EXCAVATION BENEATH PAVEMENT AND BUILDING AREAS**

EXCAVATION UNDER AREAS TO BE PAVED TO EXTEND TO THE BOTTOM OF PAVEMENT SECTION. AFTER REQUIRED EXCAVATION IS COMPLETE SCARIFY EXPOSED SURFACE, BRING TO OPTIMUM MOISTURE CONTENT, AND COMPACT BY MAKING THREE PASSES OVER THE AREA WITH THE REAR TIRES OF A LOADED TEN YARD DUMP TRUCK.

PIPELINE TRENCH EXCAVATION

EXCEPT WHEN SHOWN OR SPECIFIED OTHERWISE, EXCAVATE FOR PIPELINES BY THE OPEN-CUT TRENCH METHOD. BOTTOM OF TRENCH TO HAVE MINIMUM WIDTH EQUAL TO THE OUTSIDE DIAMETER OF PIPE PLUS 12 INCHES AND MAXIMUM WIDTH EQUAL TO OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES. EXCAVATE BOTTOM OF TRENCH UNIFORMLY TO GRADE OF BOTTOM OF

DISPOSAL OF EXCESS EXCAVATED MATERIAL REMOVE AND DISPOSE OF EXCAVATED MATERIAL TO LOCATION DIRECTED BY OWNER.

PIPE BEDDING AND BACKFILL IN PIPE ZONE

STORM DRAIN PIPE - 1 IN. MINUS CRUSHED AGGREGATE.

TRENCH BACKFILL ABOVE PIPE ZONE **OUTSIDE PAVEMENT AND STRUCTURE LIMITS - SELECT NATIVE TRENCH AND FOOTING** EXCAVATION MATERIAL WITH GREATEST QUANTITY OF SOIL FRACTION PRACTICAL, NO ROCKS LARGER THAN 6 INCH SIZE. TOP 12 INCHES OF BACKFILL TO BE TOPSOIL. UNDER PAVEMENTS - 1 INCH MINUS CRUSHED AGGREGATE.

UNDER PAVEMENTS - 95% OF OPTIMUM DENSITY AS DETERMINED BY ASTM D1557

COMPACT IN 8 IN. LAYERS TO 95% OF ASTM D-1557 OPTIMUM DENSITY.

UNDER STRUCTURES AND SIDEWALKS - 1 INCH MINUS CRUSHED AGGREGATE

ELSEWHERE - 90 % OF ASTM D-1557. OBTAIN BY MECHANICAL MEANS OR BY WATER JETTING WITH CONCRETE VIBRATOR BETWEEN PIPE AND TRENCH SIDEWALL RESTORE SURFACE OF TRENCH TO ORIGINAL CONDITION IF NOT UNDER PAVEMENT OR

STRUCTURAL BACKFILL UNDER OR AROUND STRUCTURES, UNDER SLABS SELECT IMPORTED CLEAN, DURABLE ROCK AGGREGATE, UNIFORMLY GRADED, MAXIMUM SIZE 3", MAXIMUM 5% PASSING #200 SIEVE

STRUCTURES.

CLEAN 1"-0" GRADATION CRUSHED AGGREGATE CONFORMING TO OREGON STATE HIGHWAY DIVISION (O.S.H.D.) SPECIFICATIONS FOR ROADWAY BASE AGGREGATE. COMP LAYERS WITH MECHANICAL EQUIPMENT TO 95% OF OPTIMUM DENSITY DETERMINED BY ASTM D-1557 METHOD "D" AT ±2% OF OPTIMUM MOISTURE CONTENT.

STORM AND SANITARY SEWER PIPE

POLYVINYL CHLORIDE PIPE (PVC) - PVC PIPE CONFORMING TO ASTM D 3034 SDR 35, (4"-15") OR ASTM F789 MINIMUM PIPE STIFFNESS 46 PSI, (4"-15") OR ASTM F679,T-1, MINIMUM PIPE STIFFNESS 46 PSI, (18"-27"). USE ASTM D 1785 SCHEDULE 40 WHEN REQUIRED BY UNIFORM PLUMBING CODE WITH STATE OF OREGON AMENDMENTS FOR SANITARY SEWER SERVICE LINES. PIPE SHALL HAVE INTEGRAL BELL-END UTILIZING GASKET-TYPE JOINTS. FITTINGS SHALL BE GASKET-TYPE AND COMPLY WITH PIPE SPECIFICATION SUITABLE FOR USE WITH EITHER PIPE.

DUCTILE IRON PIPE (DI) - CONFORM TO ANSI A21.51 CLASS 150 OR AWWA C151 LINED WITH CEMENT MORTAR AND SEAL COATED IN ACCORDANCE WITH ANSI STANDARD A21.4 AND AWWA C104 WITH PUSH ON JOINT OR MECHANICAL JOINTS AS SPECIFIED, CONFORMING TO FEDERAL SPECIFICATION WW-P-421C AND ANSI SPECIFICATION A21.11.

WATER DISTRIBUTION PIPE AND FITTINGS:

6 IN. AND THROUGH 30 IN. - PIPE SHALL BE DUCTILE IRON PIPE CONFORMING TO ANSI A21.51 (AWWA C151), THICKNESS CLASS 50 DUCTILE IRON PIPE (4 IN. SHALL BE CLASS 51) AND SHALL BE STANDARD THICKNESS CEMENT LINED CONFORMING TO ANSI A21.10 (AWWA C110). JOINTS SHALL BE RUBBER GASKET OF EITHER THE PUSH-ON OR MECHANICAL JOINT TYPE CONFORMING TO ANSI A21.11 (AWWA C111).

4 IN. AND SMALLER - POLYVINYL CHLORIDE PIPE AND FITTINGS: IPS, SOLVENT WELD, PRESSURE RATING SCHEDULE 40, CONFORM TO ASTM D1785, NSF AND IAPMO LISTED.

SQUARE OR RECTANGULAR CATCHBASINS, FRAMES AND GRATES CONSTRUCT AS DETAILED.

MADE WITH PORTLAND CEMENT MIXED ONE (1) PART CEMENT TO ONE AND ONE-HALF (1 1/2) PARTS MASON'S SAND AND CLEAN WATER.

ASPHALT PAVEMENT

HOT PLANT MIX ASPHALT - CONFORM THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, OREGON DEPARTMENT OF TRANSPORTATION, LATEST EDITION. CLASS OF ASPHALT MIX - GRADATION CLASS "LIGHT DUTY". THE WEIGHT OF AGGREGATE PERCENT PASSING THE STANDARD SIEVE SIZES SHOULD FAVOR A LARGER PERCENTAGE OF FINE AGGREGATE WITHIN THE GRADATION BANDS AND ASPHALT CONTENT SHALL BE NOT LESS THAN 6% BY WEIGHT.

TACK COAT - EMULSIFIED ASPHALT SS-1, SS-1H, CSS-1H, OR CSS-1H DILUTED WITH EQUAL PARTS WATER.

SITE PREPARATION - PRIOR TO PLACING AGGREGATE BASE ON SUB-GRADE, PROOF ROLL ENTIRE PAVEMENT AREA WITH LOADED 10 CUBIC YARD DUMP TRUCK. SOFT OR YIELDING AREAS SHALL BE SCARIFIED, DRIED, RE-COMPACTED, AND AGAIN PROOF ROLLED. GEOTEXTILE FABRIC - PLACE OVER COMPACTED SUBGRADE PRIOR TO PLACEMENT OF BASE AGGREGATE. EXXON GTF200S, AMOCO 4545 OR EQUAL NON-WOVEN FABRIC. LAP 12" MIN. FINE GRADE - AFTER SUB-GRADE PROOF ROLLING IS COMPLETED, FINE-GRADE TO A TOLERANCE OF WITHIN +/-0.05 FEET OF REQUIRED GRADE. FINISHED SURFACE OF THE ASPHALT CONCRETE IS NOT TO VARY MORE THAN +/- 1/8 INCH IN TEN FEET WHEN MEASURED IN ANY DIRECTION.

BASE AGGREGATE - APPLY IN LIFTS TO THE THICKNESS REQUIRED ON PLANS. COMPACT TO 95 % OF OPTIMUM DENSITY AS DETERMINED BY ASTM D 1557. INSTALL CONTROL ELEVATION STAKES AT TOP OF BASE AGGREGATE TO ASSIST IN ACHIEVING REQUIRED FINISHED SURFACE TO A TOLERANCE OF +/-0.04 FEET. PLACING HOT MIX ASPHALT - AFTER BASE AGGREGATE IS INSTALLED TO FINISHED GRADE.

PLACE HOT MIX ASPHALT SURFACE COURSE IN LAYER THICKNESS SHOWN ON PLANS, BUT NOT THICKER THAN 4 INCHES. PLACE HOT MIX ASPHALT WITH MECHANIZED SELF-PROPELLED PAVING MACHINES, EXCEPT PIGGY-BACK BOX SPREADERS MAY BE PERMITTED IN SMALL AREAS BY EXPRESS PERMISSION OF ENGINEER. RAKE OUT LARGER AGGREGATE WHERE FEATHERING TO MATCH EXISTING PAVEMENT.

COMPACTION - START ROLLER COMPACTING AS SOON AS HOT MIX ASPHALT MATERIAL CAN BE COMPACTED WITHOUT DETRIMENTAL DISPLACEMENT. ROLL SURFACE A MINIMUM OF FOUR COMPLETE PASSES WITH A POWERED STEEL WHEEL DRUM ROLLER WEIGHING NOT LESS THAN TEN NOR MORE THAN TWELVE TONS AND CONTINUE UNTIL ALL ROLLER MARKS DISAPPEAR. COMPACT TO AT LEAST 91% OF THE THEORETICAL MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH ASTM D-2041.

REV. DATE **DESCRIPTION**

DIVISION 3 - CONCRETE (SITE WORK RELATED ONLY)

PART 1 GENERAL

CAST-IN-PLACE CONCRETE FOR SLAB ON GRADE, AND OTHER CONCRETE COMPONENTS ASSOCIATED WITH THE CONSTRUCTION.

SUBMIT (4) SETS OF THE FOLLOWING: CONCRETE MIX DESIGN, AND MANUFACTURER'S CERTIFICATIONS HEREINAFTER SPECIFIED; REBAR SHOP DRAWINGS, BENDING LISTS AND

CONCRETE TESTS (FOR SLABS ONLY)

CONCRETE TESTING TO BE ARRANGED FOR BY CONTRACTOR AND PAID FOR BY OWNER. FURNISH REPORT TO OWNER AND STRUCTURAL ENGINEER.

CONCRETE SLUMP TEST - FOLLOW ASTM C-143 AND C-172. PREPARE TESTS FROM SAME BATCH AS THAT EMPLOYED IN PREPARING STRENGTH TEST SPECIMENS, UNLESS OTHERWISE DIRECTED. IF MEASURED SLUMP FALLS OUTSIDE SPECIFIED LIMITS RE-TEST IMMEDIATELY FROM ANOTHER PORTION OF SAME LOAD. IN EVENT OF SECOND FAILURE CONCRETE SHALL BE CONSIDERED TO FAIL SPECIFICATION REQUIREMENTS.

CONCRETE COMPRESSIVE STRENGTH TEST - FOLLOW ASTM C-31, C-39, AND C-172. PREPARE ONE SET OF THREE TEST CYLINDERS NOT LESS THAN ONCE A DAY, OR NOT LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE OR NOT LESS THAN ONCE FOR EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS. IF THE TOTAL VOLUME OF CONCRETE IS SUCH THAT THE FREQUENCY OF TESTING REQUIRED ABOVE WOULD PROVIDE LESS THAN FIVE STRENGTH TESTS FOR A GIVEN CLASS OF CONCRETE, TESTS SHALL BE MADE FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE BATCHES ARE USED.

BREAK 1 CYLINDER AT 7 DAYS OF AGE, AND 2 CYLINDERS AT 28 DAYS. ADDITIONAL TESTS MAY BE MADE AS DETERMINED BY ENGINEER. IF ANY ONE SET OF 2 CYLINDERS DOES NOT DEVELOP FULL DESIGN STRENGTH AT 28 DAYS OF AGE, CORES MAY BE CALLED FOR. ALL CORING COSTS ARE TO BE PAID BY THE CONTRACTOR. IF TESTS INDICATE CONCRETE HAS FAILED TO MEET SPECIFICATIONS, REPLACE SUBSTANDARD MATERIAL WHEN DIRECTED BY ENGINEER.

CONCRETE AIR CONTENT TEST - FOLLOW ASTM C-231. TEST EACH CYLINDER CONTAINING AIR

OTHER INFORMATION - TEMPERATURE, TIME OF BATCH AND DISCHARGE AND FIELD ADDED

SPECIAL CONCRETE INSPECTION SPECIAL INSPECTION IS NOT REQUIRED.

PART 2 PRODUCTS

CONCRETE QUALITY CONCRETE MIX DESIGN - CONFORM TO ACI CODE 318-02

SELECTION OF CONCRETE PROPORTIONS SHALL BE BASED ON REQUIRED AVERAGE COMPRESSIVE STRENGTH OF CONCRETE F'CT STATED BELOW UNLESS CONCRETE PRODUCTION FACILITY HAS 15 OR MORE TEST RECORDS MEETING THE REQUIREMENTS OF AC 318-02 5.3.1.

DOCUMENTATION THAT PROPOSED CONCRETE PROPORTIONS WILL PRODUCE AN AVERAGE COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN REQUIRED AVERAGE COMPRESSIVE STRENGTH F'or SHALL CONSIST OF LESS THAN 30 BUT NOT LESS THAN 10 CONSECUTIVE TEST RECORDS WHICH ENCOMPASS A PERIOD OF TIME NOT LESS THAN 45 DAYS. SUCH RECORDS SHALL REPRESENT MATERIALS AND CONDITIONS SIMILAR TO THOSE EXPECTED. WHEN AN ACCEPTABLE RECORD OF FIELD TEST RESULTS IS NOT AVAILABLE, CONCRETE PROPORTIONS MAY BE ESTABLISHED BASED ON TRIAL MIXTURES MEETING THE REQUIREMENTS OF ACI 318-02 5.3.3.2.

CONCRETE STRENGTH AND MINIMUM CEMENT CONTENT SLABS-ON-GRADE

F'c = 3500 PSI, F'cr = 4700 PSI, MAX W/C RATIO = 0.53

F'c = 3000 PSI, F'cr = 4200 PSI, MAX W/C RATIO = 0.59

ALTERNATE MIX DESIGN - AS AN ALTERNATE TO DESIGNING THE CONCRETE MIXES FOR THE REQUIRED AVERAGE COMPRESSIVE STRENGTH For AS SPECIFIED ABOVE, THE CONTRACTOR MAY DESIGN THE CONCRETE MIXES IN ACCORDANCE WITH ACI 318-02 5.3.1 AND 5.3.2. WHERE A CONCRETE PRODUCTION FACILITY HAS 15 OR MORE TEST RECORDS, A STANDARD DEVIATION SHALL BE ESTABLISHED. TEST RECORDS SHALL REPRESENT MATERIALS AND CONDITIONS SIMILAR TO THOSE EXPECTED AND PRODUCED TO MEET A SPECIFIED STRENGTH OR STRENGTHS F'c WITHIN 1000 PSI OF THAT SPECIFIED FOR PROPOSED WORK.

FLY ASH ADMIXTURES - USE OPTIONAL, CONFORM TO ASTM C 618-80, CLASS F. MAXIMUM FLY ASH CONTENT - REGARDLESS OF DESIGN STRENGTH, WHEN FLY ASH IS AVAILABLE, MINIMUM CEMENT CONTENT TO BE 80% OF THE MINIMUM AMOUNT SHOWN IN TABLE ABOVE. CONTRACTOR REQUIRED TO INCREASE CEMENT CONTENT TO MEET STRENGTH. AGGREGATES - CONFORM TO ASTM C-33. CEMENT - ASTM C150 TYPE 1 OR 2.

WATER REDUCING ADMIXTURES REQUIRED - ASTM C 494 TYPE A, NON-TOXIC AFTER 30 DAYS, NOT CONTAINING CHLORIDES, COMPATIBLE WITH A.E.A. ADMIXTURES. MASTER BUILDERS "POLYHEED"

ENTRAINED AIR CONTENT (ASTM C231) - EXTERIOR SLABS AND CURBS 5% +/-1%. SUPERPLASTICIZERS ADMIXTURE - MASTER BUILDERS 430 R. SUPERPLASTICIZER IS NOT A MANDATORY ADDITIVE MATERIAL FOR ALL CONCRETE. USE MAY BE RECOMMENDED FOR TEMPORARY INCREASE OF SLUMP. CONTRACTOR MAY ELECT TO USE SUPERPLASTICIZER AT HIS OPTION OR CONTRACTOR MAY BE REQUESTED BY ENGINEER TO USE IT AND BE COMPENSATED CALCIUM CHLORIDE - NOT PERMITTED IN CONCRETE.

SLUMP RANGE

SLABS-ON-GRADE: 2 IN. MIN., 4 IN. MAX., 7 IN. MAX. WITH PLASTICIZERS OTHER: 2 IN. MIN., 4 IN. MAX **MAXIMUM SIZE COURSE AGGREGATE** SLABS - 3/4 IN.

CONCRETE REINFORCING BAR ASTM A615 GRADE 60. SHOP FABRICATE ALL REINFORCING BAR.

MINIMUM BAR LAP - 12 IN. MINIMUM CONCRETE COVER -CAST AGAINST EXPOSED EARTH - 3 IN.

CONCRETE EXPOSED TO WEATHER - 1 1/2 IN. CONCRETE NOT EXPOSED TO WEATHER OR GROUND - 3/4 IN.

P.R.C. #89 OR APPROVED CONFORMING TO ASTM D-1751. DEPTH AS REQUIRED TO BRING TOP

WITHIN 1/4 INCH OF SURFACE OF SLAB. ISOLATE SLAB FROM OTHER FIXED OBJECTS.

METAL CHAIRS OR CONCRETE BRICK SUPPORTS SPACED SO AS TO ELIMINATE DEFLECTION OF REBAR. USE ONLY CONCRETE BRICK SUPPORTS IN AREAS WHERE VAPOR RETARDER HAS BEEN PLACE.

PART 3 EXECUTION

PLACING CONCRETE IN HOT, COLD WEATHER

PREPARE CONCRETE AGGREGATES, MIXING WATER AND INGREDIENTS; PLACE CONCRETE, CURE, AND PROTECT IN ACCORDANCE WITH REQUIREMENTS OF ACI 305 "RECOMMENDED PRACTICES FOR HOT WEATHER CONCRETING" AND ACI 306 "RECOMMENDED PRACTICES FOR COLD WEATHER CONCRETING". PROVIDE SPECIAL ADMIXTURES AND SPECIAL CURING METHODS REQUIRED BY OTHER SECTIONS IN THIS CONCRETE SPECIFICATION EVEN THOUGH NOT REQUIRED BY ACI 305,

GENERAL - CURE CONCRETE BY KEEPING SURFACE CONTINUOUSLY WET 7 DAYS. PROTECT FROM FREEZING UNTIL 7-DAY AGE. SLABS AND CURBS - USE ONE OF THE FOLLOWING METHODS FOR CURING 7 DAYS: 1 - POND SURFACE WITH WATER.

2 - COVER WITH BURLAP OR PLASTIC SHEET, KEPT WET UNDER.

3 - CONTINUOUSLY SPRINKLE EXPOSED SURFACE.

4 - APPLY CURING COMPOUND WHEN CURED TO SUSTAIN FOOT TRAFFIC, COVER WITH PLASTIC SHEET, KEPT WET UNDER. 5 - OTHER APPROVED METHOD PROVIDING UNIFORM MOIST CURE.

GENERAL - FOR ALL FINISHES, SCREED SLAB TO TRUE LEVEL OR SLOPE. NON-SLIP FINISH: PROVIDE AT EXTERIOR DRIVEWAYS AND WALKS, SCREED, CONSOLIDATE, FLOAT WITH WOOD OR CARPET FLOAT, SLIGHTLY ROUGHEN SURFACE WITH HAIR BROOM, LAYOUT SLAB JOINTS AND TOOL, ROUND EDGES TO 1/4" RADIUS.

REMOVE AND REPLACE, WHERE DIRECTED BY ENGINEER, LOOSE TOPPINGS, SURFACES, EXCESSIVE SHRINKAGE CRACKED SLABS, SLAB WITH PONDING

16,650 OREGÖN

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RIVE 156 SAL JOB NO. 06068-1 DATE 19 SEPT 2006

CEF DESIGN BY SHEET

DRAWN BY

C50'

--- 2" DIA. WEEP

- 2'-5" SQR. -

- 6" FIRE SERVICE TAP ONTO EXISTING 6" WATER MAIN IN ALLEY AND 6" TAPPING VALVE TO BE INSTALLED BY CITY FORCES. CONTRACTOR TO EXCAVATE, BACKFILL, PROVIDE THRUST RESTRAINT, INSTALL CORP STOP, PROVIDE TRAFFIC CONTROL, VALVE BOX AND REPAIR OF ALLEY MECHANICAL TURBUST DESTRAINT BEST AND 100 AND REPAIR OF ALLEY MECHANICAL TURBUST DESTRAINT BEST AND 100 AND REPAIR OF ALLEY MECHANICAL TURBUST DESTRAINT BEST AND 100 AND REPAIR OF ALLEY MECHANICAL TURBUST DESTRAINT BEST AND 100 AND 10 PROVIDE TRAFFIC CONTROL, VALVE BOX AND REPAIR OF ALLEY. MECHANICAL THRUST RESTRAINT PER STD. NO. 401.5. VALVE BOX PER STD. NO. 400. INSTALL CORP STOP NEAR TAP FOR CHLORINATION, SEE STD. NO. 412. FULLY MECHANICALLY RESTRAIN ALL PIPE JOINTS AND FITTINGS BETWEEN EXISTING MAIN AND DOUBLE DETECTOR CHECK VALVE ASSEMBLY LOCATED INSIDE MECHANICAL ROOM ON UNDERGROUND PARKING GARAGE LEVEL, SEE ARCHITECTURAL AND MECHANICAL PLANS. VERIFY DEPTH OF EXISTING GAS MAIN PER NOTE 7. LOCATE POST INDICATOR VALVE IN LANDSCAPE STRIP, SEE KEYED NOTE 18.
- 2" WATER SERVICE WITH 2" METER AND 2" DOUBLE CHECK BACKFLOW DEVICE. TAP AND 2" TAPPING VALVE TO BE INSTALLED BY CITY FORCES. CONTRACTOR TO EXCAVATE, BACKFILL, PROVIDE THRUST RESTRAINT, INSTALL CORP STOP, PROVIDE TRAFFIC CONTROL, VALVE BOX AND REPAIR OF ALLEY. VALVE BOX PER STD. NO. 400. INSTALL CORP STOP NEAR TAP FOR CHLORINATION, SEE STD. NO. 412. LOCATE METER BOX ADJACENT TO ALLEY IN LANDSCAPE STRIP AND CONSTRUCT SIMILAR TO STD. NO. 419. BACKFLOW DEVICE IS TO BE LOCATED WITHIN LANDSCAPE BOX ADJACENT TO METER BOX IN LANDSCAPE STRIP, VERIFY LOCATION OF EXISTING GAS AND WATER SERVICES, LOCATE TAP TO AVOID CONFLICT. VERIFY DEPTH OF EXISTING GAS MAIN PER NOTE 7.
 - install new natural gas service to building. Coordinate service size, and location with mechanical plans. Coordinate construction with NW natural at 503-585-6611 ex. 8142. OBTAIN FRANCHISE PERMIT.
 - INSTALL NEW ELECTRICAL SERVICE TO BUILDING FROM EXISTING VAULT IN ALLEY. COORDINATE SERVICE SIZE, LOCATION, AND LAYOUT WITH ELECTRICAL PLANS. COORDINATE CONSTRUCTION WITH SALEM ELECTRIC AT 503-362-3601. OBTAIN FRANCHISE PERMIT.
- 5 PROVIDE FIRE DEPARTMENT CONNECTION AT THE SOUTHWEST CORNER OF THE BUILDING NEAR LOCATION SHOWN, SEE FIRE SPRINKLER SYSTEM PLANS.
- 6 COORDINATE DEPTH OF UTILITY SERVICES AT EDGE OF BUILDING WITH PLUMBING, MECHANICAL, FIRE SPRINKLER SYSTEM, ARCHITECTURAL AND STRUCTURAL PLANS. ROUTE TO AVOID CONFLICT WITH STORM DRAIN PIPE WHERE APPLICABLE.
- STORM DRAIN PIPE RUNS THROUGH THE UNDERGROUND PARKING GARAGE PORTION OF THE BUILDING, AND IS SHOWN ON THIS PLAN FOR SYSTEM CLARITY. SEE PLUMBING PLAN FOR CONNECTION OF RAIN DRAINS, ATTACHMENT OF PIPE TO GARAGE STRUCTURE, CLEANOUTS INSIDE OF BUILDING, ROUTING OF PIPE TO AVOID STRUCTURAL BUILDING ELEMENTS, AND INSULATION OF PIPE.
- (8) CONSTRUCT NEW INLET INTO EXISTING STRUCTURE IN ACCORDANCE WITH CITY OF SALEM DEPARTMENT OF PUBLIC WORKS DESIGN STANDARDS AND STANDARD CONSTRUCTION SPECIFICATIONS.
- (9) AT UTILITY INSTALLATIONS IN ALLEY, SAWCUT AND REMOVE PAVEMENT 12" BEYOND EDGE OF TRENCH. REPAIR ALLEY PER STD. DWG. NO. 309.
- SAWCUT AND REMOVE MINIMUM 1' WIDE STRIP OF ALLEY PAVING ADJACENT TO EAST PROPERTY LINE TO FACILITATE CONSTRUCTION. REPAIR ALLEY PER STD. DWG. NO. 305.
- 41 AUTOMOBILE RAMP FROM ALLEY TO UNDERGROUND PARKING GARAGE. SEE ARCHITECTURAL FOR CONTINUATION OF RAMP GRADING INSIDE BUILDING.
- REPLACE ASPHALT AND CONCRETE CURBING DISTURBED OR REMOVED DURING CONSTRUCTION. REPLACE ASPHALT PER DETAIL CLEAN EDGE. BACKFILL BENEATH ASPHALT AREAS TO BE REPLACED WITH COMPACTED CRUSHED AGGREGATE. COORDINATE WITH STRUCTURAL PLANS AND DIVISION 2 SPECIFICATIONS. GRADING OF REPLACEMENT AREA SHALL MATCH EXISTING SUCH THAT DRAINAGE PATTERNS ARE PRESERVED.
- (13) LOCATE NEW CATCH BASIN DIRECTLY NORTH OF EXISTING CATCH BASIN TO BE REMOVED. ADJUST GRADING IN THIS AREA TO DRAIN TO NEW CATCH BASIN LOCATION.
- (14) AREA DRAIN, 12" SQUARE "MINI-BASIN" MODEL GMCB10-1224HB-6 AS MANUFACTURED BY GIBSON STEEL BASINS, (541) 687-8672. SET RIM ELEVATION TO 156.70. SET 4" INVERT OUT ELEVATION AT 155.20 MAXIMUM.

C.O. AT FACE OF

BUILDING INV. 155.20

CONNECT AREA DRAIN PIPE TO RAMP

-GUT 155.85

STORM, COORDINATE WITH PLUMBING PLAN.

CONC 156.81

BC 156.09

CONC 156.81

CONC 156.81

CONC 156.81

CONC 156.81

CONC 156.81-

C.O. INV. 152.82

FIRE SPRINKLER

- DRAIN DOWN

DRAINAGE SYSTEM TO BE PUMPED TO -

- (15) ABANDON EXISTING DOMESTIC WATER SERVICE AND METER VAULT IN ACCORDANCE WITH CITY OF SALEM DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.
- (16) PROVIDE CONSTRUCTION RIGHT OF ENTRY AND/OR EASEMENT FROM OWNER OF PARCEL TO THE NORTH TO CONSTRUCT REPLACEMENT CATCH BASIN AND STORM LINE.

NEW BUILDING FINISH GROUND FLOOR

ELEVATION 156.85

CONC 156.81

- (17) INSTALL 6" GATE VALVE ON FIRE SERVICE LINE DIRECTLY ADJACENT TO THE MECHANICAL ROOM WALL
- 4 18 6" POST INDICATOR VALVE, SEE KEYED NOTE 1.

MATCH EX.

SW 156.65

CITY CREWS TO TAP EXISTING SD

MH INV. 150.73, CONTRACTOR

WITH CITY FOR TAP.

SHALL PROVIDE ALL TRENCHING

AND SHORING AND COORDINATE

4, 149,55

2% MAX

2% MAX.

8" SD 17 LF

1.2% MAX

\<u>8</u>

SW 156.78-

SW 156.65

C.O. IN BUILDING

SIDEWALK 156.78

SIDEWALK ±156.11

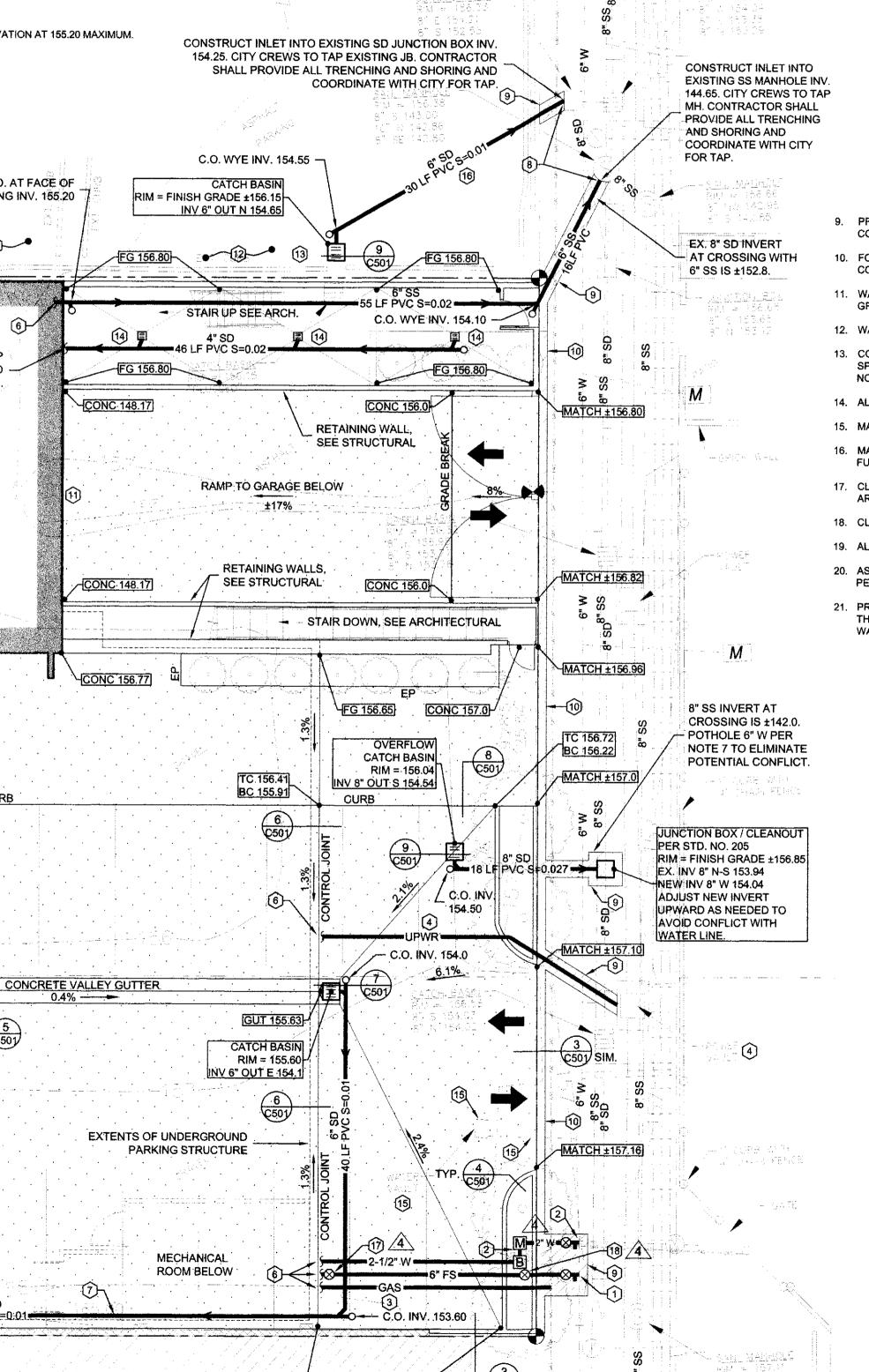
NOTE: ALL STORM DRAIN AND SANITARY SEWER PIPE TO BE PVC ASTM D3034 SDR35 PIPE UNLESS NOTED OTHERWISE. USE ASTM 1785 SCHEDULE 40 PVC STORM DRAIN PIPE WHERE WITHIN 5 FEET OF BUILDING, WITHIN BUILDING FOOTPRINT, AND WHERE COVER IS 12-24 INCHES. USE ANSI CLASS 50 DUCTILE IRON PIPE FOR COVER OF LESS THAN 12 INCHES.

> ALL STORM DRAIN AND SANITARY SEWER SLOPES TO BE 0.01/FT. MINIMUM UNLESS NOTED OTHERWISE.

> ALL STORM PIPING PER UPC DESIGN METHOD UNLESS NOTED WITH PWDS FOR DESIGN PER CITY OF SALEM PUBLIC WORKS DESIGN STANDARDS.

> > BENCHMARK INFORMATION CITY OF SALEM BENCHMARK NO. 1016 **ELEVATION 157.67**

BRASS DISK IN CONCRETE SIDEWALK. STATE ST. AND COMMERCIAL ST. N.E. NORTHWEST CORNER OF INTERSECTION, 2.95' NORTH OF NORTH CURB STATE ST., 2.75' WEST OF WEST CURB COMMERCIAL ST.

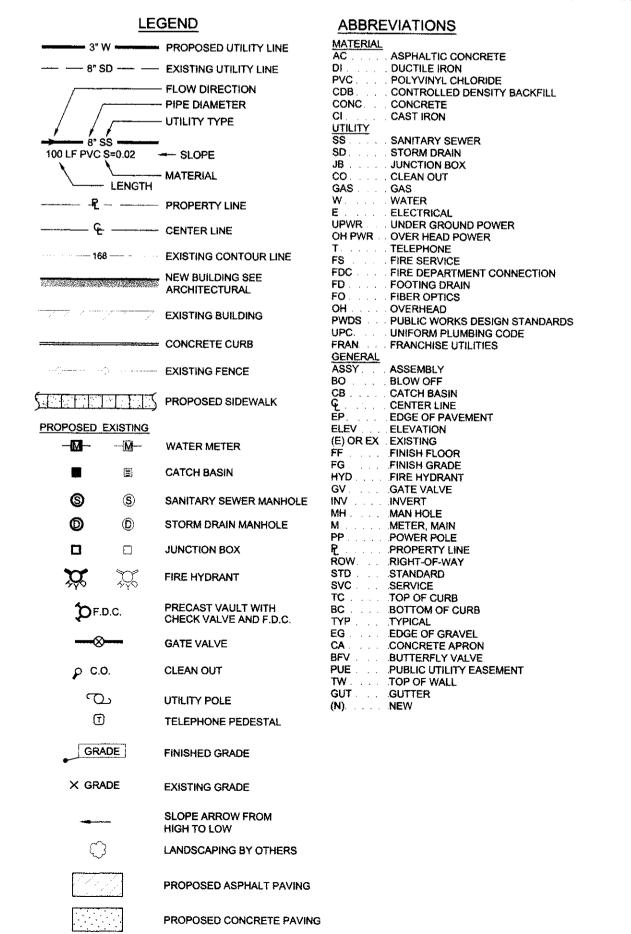


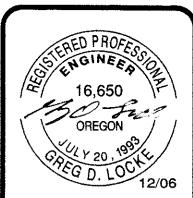
BC 156.65

REV.	DATE	DESCRIPTION
1	22 NOV 2006	REVISIONS PER CITY OF SALEM REVIEW
<u>^2</u>	3 JAN 2007	REVISIONS PER CITY OF SALEM REVIEW
3	27 JUNE 2007	REVISIONS PER CITY OF SALEM REVIEW
4	11 JULY 2007	REVISIONS PER CITY OF SALEM REVIEW

GENERAL NOTES:

- 1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP IN PUBLIC RIGHT-OF-WAY TO CONFORM TO CITY OF SALEM DEPARTMENT OF PUBLIC WORKS "DESIGN STANDARDS" AND "STANDARD CONSTRUCTION SPECIFICATIONS".
- 2. REFERENCES TO STANDARD DRAWING NUMBERS REFER TO CITY OF SALEM STANDARD DRAWINGS.
- 3. CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM CITY OF SALEM PRIOR TO START OF WORK, CONTRACTOR SHALL CONTACT CONSTRUCTION MANAGEMENT AT 588-6211, (DURING WORKING HOURS) 48 HOURS PRIOR TO START OF ANY
- 4. CONTRACTOR SHALL OBTAIN A PERMIT FROM OREGON DEPARTMENT OF TRANSPORTATION FOR ALL WORK WITHIN THE
- 5. ANY CHANGE IN CONSTRUCTION AFTER PLAN APPROVAL MUST BE SUBMITTED IN WRITING AND APPROVED BY CITY PRIOR TO CHANGE, AS PER CITY OF SALEM STANDARD CONSTRUCTION SPECIFICATIONS.
- 6. CONTRACTOR TO SUPPLY ENGINEER WITH SET OF "AS-BUILT" DRAWINGS, SHOWING ALL LENGTHS, DEPTHS, INVERTS, AND LOCATIONS OF WORK COMPLETED WITHIN THE PUBLIC RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND SECURING OF ALL SURVEYING SERVICES NECESSARY TO ACCURATELY OBTAIN "AS-BUILT" INFORMATION.
- 7. CONTRACTOR TO VERIFY LOCATION (LINE AND GRADE) OF ALL EXISTING UTILITIES PRIOR TO START OF WORK, POTHOLE UTILITIES AS NEEDED AND NOTIFY ENGINEER IF CONFLICT EXISTS.
- 8. COORDINATION WITH UTILITIES.
 - A. THE LOCATION AND DESCRIPTION OF EXISTING UTILITIES SHOWN ARE FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS. THE CITY OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF
 - B. OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. COPIES OF THE RULES ARE AVAILABLE BY CALLING THE OREGON UTILITY NOTIFICATION CENTER AT (503) 232-1987.
 - THE CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY AT LEAST 48 BUSINESS-DAY HOURS PRIOR TO EXCAVATING, BORING, OR POTHOLING. ALL UTILITY CROSSINGS SHALL BE POTHOLED AS NECESSARY PRIOR TO EXCAVATING OR BORING TO ALLOW THE CONTRACTOR TO PREVENT GRADE OR ALIGNMENT CONFLICTS.
 - D. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION.
- E. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDON UTILITIES.
- 9. PROVIDE TEMPORARY TRAFFIC CONTROL PER CITY OF SALEM TRAFFIC MANUAL. COORDINATE WITH ODOT FOR TRAFFIC CONTROL WITHIN THE FRONT STREET RIGHT-OF-WAY.
- 10. FOR ALL UTILITY WORK WITHIN PUBLIC RIGHT-OF-WAY, BEDDING AND BACKFILL SHALL BE PER CITY OF SALEM STANDARD CONSTRUCTION SPECIFICATIONS.
- 11. WATER SUPPLY LINES TO BE LOCATED A MINIMUM 36" CLEAR BELOW FINISHED GRADE AND 30" CLEAR BELOW FINISHED
- 12. WATER MAIN HORIZONTAL JOINT RESTRAINTS TO BE INSTALLED PER CITY OF SALEM STANDARD DRAWING NO. 401.5.
- 13. CONTRACTOR TO PROVIDE FACILITIES FOR TESTING ACCORDING TO SUBSECTION 501.3.10 OF SALEM CONSTRUCTION SPECIFICATIONS. INSTALL A CORPORATION STOP FOR CHLORINATION ACCORDING TO CITY OF SALEM STANDARD DRAWING
- ALL STRUCTURES TO BE SET TO FINISH GRADE PRIOR TO CONSTRUCTION OF FINAL GROUND SURFACE.
- 15. MAINTAIN 6" CLEAR BETWEEN WATERLINES AND STORM DRAIN LINES. BACKFILL WITH CRUSHED AGGREGATE.
- 16. MAINTAIN 18" MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPE AND DOMESTIC WATER LINE, CENTER ONE FULL LENGTH OF PIPE ON CROSSING, DOMESTIC WATERLINE BELOW SANITARY SEWER PIPE TO BE INSTALLED PER OAR 333.
- 17. CLEANOUTS ON SANITARY SEWER AND STORM DRAIN PIPING TO BE SPACED MAXIMUM OF 100 FEET APART. CLEANOUTS ARE REQUIRED FOR EACH AGGREGATE HORIZONTAL CHANGE IN DIRECTION EXCEEDING 135 DEGREES.
- 18. CLEANOUT COVER TO BE CAST IRON VALVE BOX AND COVER. INSTALL FLUSH WITH FINISHED GRADE.
- 19. ALL FIRE SERVICE PIPING AND FITTINGS TO BE ANSI CLASS 50 DUCTILE IRON WATER PIPE
- 20. ASSESSMENT OF ALLEY PAVEMENT SECTION WILL BE MADE WHEN UTILITY POTHOLING AND/OR UTILITY TRENCHING WORK IS PERFORMED. SUITABILITY OF AND/OR ADDITION TO ALLEY PAVEMENT SECTION WILL BE DETERMINED AT THAT TIME.
- 21. PROVIDE 10' WIDE UTILITY EASEMENT TO THE CITY OF SALEM CENTERED ON THE FIRE SERVICE PIPE AND RUNNING FROM THE ALLEY TO THE EAST FACE OF THE MECHANICAL ROOM. ALSO PROVIDE ADDITIONAL WIDTH ADJACENT TO THE RIGHT OF WAY TO INCLUDE ALL PORTIONS OF THE DOMESTIC WATER SERVICE UPSTREAM OF THE DOMESTIC BACKFLOW DEVICE.





RIVE 156 SAL FIRE

JOB NO. 06068-1 DATE 19 SEPT 2006 DRAWN BY CEF

DESIGN BY CEF SHEET F101

2% MAX.

CIVIL SITE PLAN

SCALE: 1"=10'-0"

CONC 156.81

C.O. INV, 152,82 ·

FIRE SPRINKLER

DRAIN DOWN

CATCH BASIN

INV 6" OUT E 154.1

EXTENTS OF UNDERGROUND

PARKING STRUCTURE

MECHANICAL

ROOM BELOW

RIM = 155.60

<u>CATCH BASIN</u> RIM = 156.19 12" E 152.85

12" W 152.78

12" N 150.47

12" S 150.25

STORM MANHOLE RIM = 156.49

12" S 149.41

12" N 149.35

2% MAX

10"TRE

SW 156.78

SW 156.65

MATCH EX.

SIDEWALK

CONC 156.81

SIDEWALK 156.78

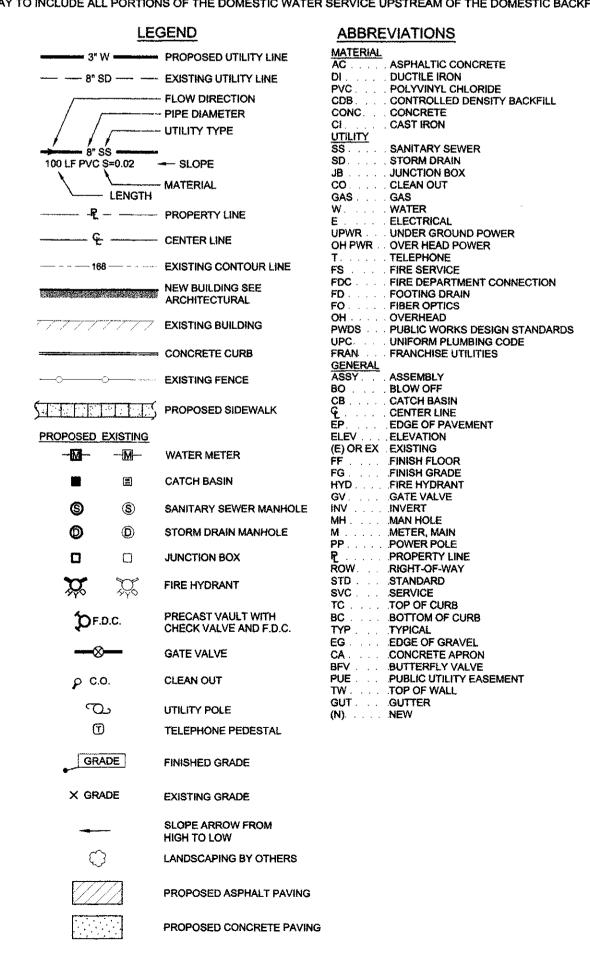
REV.	DATE	DESCRIPTION
Â	22 NOV 2006	REVISIONS PER CITY OF SALEM REVIEW
<u>^2</u>	3 JAN 2007	REVISIONS PER CITY OF SALEM REVIEW
3	27 JUNE 2007	REVISIONS PER CITY OF SALEM REVIEW
4	11 JULY 2007	REVISIONS PER CITY OF SALEM REVIEW

GENERAL NOTES:

- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP IN PUBLIC RIGHT-OF-WAY TO CONFORM TO CITY OF SALEM DEPARTMENT OF PUBLIC WORKS "DESIGN STANDARDS" AND "STANDARD CONSTRUCTION SPECIFICATIONS".
- 2. REFERENCES TO STANDARD DRAWING NUMBERS REFER TO CITY OF SALEM STANDARD DRAWINGS.
- 3. CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM CITY OF SALEM PRIOR TO START OF WORK, CONTRACTOR SHALL CONTACT CONSTRUCTION MANAGEMENT AT 588-6211, (DURING WORKING HOURS) 48 HOURS PRIOR TO START OF ANY
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AND SECURING OF ALL SURVEYING SERVICES NECESSARY TO ACCURATELY OBTAIN "AS-BUILT" INFORMATION.

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- POWER 4

~- 1' CURB WITH 4' CHAIN FENCE

- <u>SAN. MANHOLE</u> RIM = 157.11

8" S 144.45

8" N 144.25

16,650 ∖ ∕∕ OREGŎN

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0 =

PARK

RIVE 156 SAL JOB NO. 06068-1

0

DATE 19 SEPT 2006 DRAWN BY CEF CEF DESIGN BY SHEET F101