

SITE UTILITY NOTES

- 1. THE LOCATION OF EXISTING UTILITIES, SUCH AS WATER MAINS, SEWERS, GAS LINES, ETC. AS SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. BE ADVISED THAT THE ENGINEER AND OWNER DO NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF THE LOCATIONS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY COMPANIES FORTY—EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION IN ORDER TO HAVE THE UTILITIES MARKED AND LOCATED IN THE FIELD PRIOR COMMENCEMENT
- 2. WHERE APPLICABLE UTILITY TRENCHES CROSSING PAVEMENT AREAS SHALL BE BACKFILLED WITH GRANULAR MATERIAL IN TWELVE INCH (12") LAYERS AND COMPACTED TO NINETY-EIGHT PERCENT (98%) MAXIMUM DENSITY AS DETERMINED BY AASHTO
- 3. ALL UNSUITABLE MATERIALS UNDER WATER PIPES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL COMPACTED TO NINETY-EIGHT PERCENT (98%) OF ITS MAXIMUM DENSITY AT TWO PERCENT (2.0%) MORE OR LESS OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557).
- 4. ANY DAMAGE TO UNDERGROUND UTILITIES AND/OR STRUCTURES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
- 5. THE CONTRACTOR SHALL INSTALL ALL WATER AND SEWER LINES AND SERVICES AT A MINIMUM OF THIRTY-SIX INCHES (36") BELOW FINISHED GRADE TO TOP OF PIPE UNLESS INDICATED OTHERWISE ON THE PLANS.
- 6. ALL MATERIALS AND CONSTRUCTION ARE TO BE IN ACCORDANCE WITH CITY, STATE, AND COUNTY STANDARDS AND SPECIFICATIONS.
- 7. ALL SANITARY SEWER GRAVITY PIPE SHALL BE POLYVINYL CHLORIDE (PVC) CONFORMING TO ASTM-3034, SDR 35 AND BE INSTALLED IN ACCORDANCE WITH ASTM D-2321.
- 8. SANITARY SEWER PRESSURE PIPE SHALL BE POLYVINYL CHLORIDE PRESSURE PIPE CONFORMING TO AWWA C900 WITH DIMENSION RATIO (DR) OF TWENTY FIVE (25) AND A MINIMUM PRESSURE CLASS OF ONE HUNDRED POUNDS PER SQUARE INCH (100 P.S.I.).
- 9. WHERE APPLICABLE, SIX INCH (6") POLYVINYL CHLORIDE SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF ONE PERCENT (1.0%) AND FOUR INCH (4") POLYVINYL CHLORIDE SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF TWO PERCENT (2.0%)
- 10. WATER SERVICE PIPE SHALL BE POLYVINYL CHLORIDE PRESSURE PIPE CONFORMING TO AWWA C900 WITH DIMENSION RATIO (DR) OF EIGHTEEN (18) AND A MINIMUM PRESSURE CLASS OF ONE HUNDRED FIFTY POUNDS PER SQUARE INCH (150 P.S.I.).
- 11. ALL WATER PIPE SHALL BE DISINFECTED AND HYDROSTATICALLY TESTED IN ACCORDANCE WITH AWWA STANDARDS C651, C600 OR M23 FOR POLY VINYL CHLORIDE AND COUNTY SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE AT HIS EXPENSE, ALL NECESSARY TESTING EQUIPMENT, PRESSURE GAUGES, WATER METERS AND FACILITIES REQUIRED FOR PRESSURE AND LEAKAGE
- 12. FULLY RESTRAINED DUCTILE IRON PIPING SHALL BE USTR FLEX OR APPROVED EQUAL.
- 13. PVC JOINT RESTRAINT SHALL BE UNI-FLANGE SERIES 1350 OR APPROVED EQUAL.
- 14. SITE LIGHTING SHALL BE INSTALLED AS TO NOT ILLUMINATE OR SHADOW ADJACENT PROPERTIES.
- 15. ALL "ON-SITE" WATER AND SANITARY SEWER IMPROVEMENTS SHALL BE INSTALLED AND MAINTAINED BY THE OWNER IN CONFORMANCE WITH THE LOCAL UTILITY PROVIDER. ALL "OFFSITE" WATER AND SANITARY SEWER IMPROVEMENTS (IF APPLICABLE) SHALL BE INSTALLED BY THE OWNER AND MAINTAINED BY THE LOCAL UTILITY PROVIDER.
- 16. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN OUTS, MANHOLES, CATCH BASINS, INLETS, ,ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR
- 17. ELECTRICAL, TELEPHONE, GAS AND CABLE TELEVISION SERVICE WILL BE PROVIDED BY THE APPROPRIATE UTILITY COMPANIES. THE CONTRACTOR SHALL COORDINATE LOCATIONS AND SERVICES FOR THESE UTILITIES WITH THE ENTITIES INVOLVED.
- 18. THE ON-SITE WASTEWATER COLLECTION SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED.
- 19. THE CONTRACTOR SHALL NOTIFY THE ORANGE COUNTY UTILITIES DEPARTMENT FORTY-EIGHT (48) HOURS PRIOR TO START OF ANY UTILITIES CONSTRUCTION.
- 20. ALL PROPOSED UTILITIES CONSTRUCTION THAT WILL BE CONNECTING TO THE OCU WATER AND WASTEWATER SYSTEMS SHALL CONFORM TO THE ORANGE COUNTY MANUAL OF STANDARDS AND SPECIFICATIONS FOR WASTEWATER AND WATER MAIN CONSTRUCTION LATEST EDITION.

EMERGENCY WASTEWATER AND WATER MAIN BREAK PROCEDURES:

1. EXCAVATE CAUTIOUSLY:

- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN PROXIMITY OF WASTEWATER FORCE MAINS AND GRAVITY SEWERS. FORCE MAIN AND SEWER LOCATIONS SHOWN ON PLANS ARE NOT EXACT OR GUARANTEED. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION.
- 2. TELEPHONE NOTIFICATION: THE DRANGE COUNTY DISPATCH OPERATION SHALL BE GRAVITY SEWER OR WATER MAIN BREAK DAMAGE AT 407-254-9798.
- 3. REPAIR IMMEDIATELY: ALL DAMAGE TO DRANGE COUNTY'S MAINS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE IF THE REPAIR IS NOT MADE IN A TIMELY MANNER, AS DETERMINED BY THE DRANGE COUNTY UTILITIES INSPECTOR. DRANGE COUNTY MAY PERFORM REPAIRS AND THE CONTRACTOR WILL BE CHARGED FOR REPAIRS.

4. ORANGE COUNTY UTILITIES DEPARTMENT GENERAL:

- DRANGE COUNTY UTILITIES CONSTRUCTION INSPECTION SECTION 407-254-9798.
- DRANGE COUNTY UTILITIES ENGINEERING DIVISION 407-254-9680.

5. ADVANCED NOTIFICATION OF CONSTRUCTION:

THE DRANGE COUNTY UTILITIES CONSTRUCTION SECTION (407-254-9798) SHALL BE NOTIFIED AT LEAST 7 DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY.

6. ADVANCED NOTIFICATION OF PENDING CONNECTION:

- THE DRANGE COUNTY WATER DIVISION (407-254-9768) AND THE DRANGE COUNTY WASTEWATE DIVISION (407-254-9680) SHALL BE NOTIFIED AT LEAST (7) DAYS IN ADVANCE TO SCHEDULE MAIN TIE-INS AND VALVE OPERATION. 7. OPERATION OF ORANGE COUNTY VALVES:
- WATER, WASTEWATER, AND REUSE VALVES ARE TO BE OPERATED ONLY BY ORANGE COUNTY UTILITIES INSPECTOR (836-7274). ALL VALVES BEING INSTALLED ARE TO REMAIN CLOSED DURING CONSTRUCTION.

8. OPERATION OF ORANGE COUNTY PUMP STATIONS:

INSPECTOR (407-254-9798).

THE CONTRACTOR SHALL COORDINATE ALL PUMP STATION OPERATION AND SHUT DOWN WITH THE ORANGE COUNTY UTILITY

ORANGE COUNTY UTILITIES

STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A	GENERAL	
DATE: February 11, 2011	SEPARATION REQUIREMENTS FOR	FIGURE A116
WATER	, WASTEWATER AND RECLAIMED WATER MAINS	

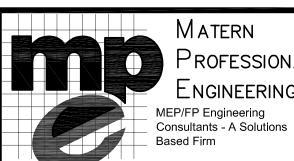
HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS								
PROPOSED	POTABLE WATER		RECLAIMED WATER		WASTEWATER (GRAVITY & FM)		STORM SEWER	
UTILITY	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT
POTABLE WATER	3' NOTE 1	12"	3' NOTE 1 & 3	12" NOTE 3	6' NOTE 3	12" NOTE 3	3' NOTE 1 & 3	12"/18" NOTE 2 & 3
RECLAIMED WATER	3' NOTE 1 & 3	12" NOTE 3	3' NOTE 1	12"	3' NOTE 1	12"	3' NOTE 1	12"/18" NOTE 2
WASTEWATER (GRAVITY AND FM)	6' NOTE 3	12" NOTE 3	3' NOTE 1	12"	3' NOTE 1	12"	3' NOTE 1	12"/18" NOTE 2
RIGHT OF WAY	3' NOTE 1	N/A	3' NOTE 1	N/A	3' NOTE 1	N/A	N/A	N/A

NOTES:

- THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTHS, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
- THE 18-INCH SEPARATION REQUIREMENT APPLIES WHEN THE STORM PIPE CROSSES ABOVE THE OCU MAIN, AND WHEN THE STORM PIPE HAS A DIAMETER EQUAL TO OR GREATER THAN 24 INCHES. OTHERWISE, THE REQUIRED SEPARATION IS 12 INCHES.
- THIS SEPARATION REQUIREMENT COMPLIES WITH MINIMUM FDEP SEPARATION REQUIREMENTS OUTLINED IN 62-555.314, FAC. VARIANCES FROM THE FDEP REQUIREMENTS MUST COMPLY WITH 62-555.314(5), FAC AND MUST BE APPROVED
- INDIVIDUALLY BY BOTH FDEP AND OCU. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
- NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURE.



Ph: 407-488-9456 Fax: 407-641-9993 CERTIFICATE OF AUTHORIZATION No. 28312



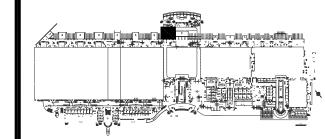
ORLANDO I Fort Myers I Jacksonville I Tampa Matern Professional Engineering, Inc 130 Candace Drive Maitland, FI 32751-3331

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ENG. BUS. No. EB-0005096 CERT. OF AUTH. No. 5096

ORANGE COUNTY CONVENTION WEST BUILDING **GREASE TRAP** REPLACEMENT

> Constance A. Owens, PE, LEED AP License #54842



<u>West Building Key Plan</u>



Revisions

No.	Date	Description				
1	7/21/15	ADDENDUM #1				

■ MPE PROJ#: 2014-140

Designed By: CAO

Drawn By: CAO

Checked By: CAO

07/21/15 Issue Date:

Drawing Scale: AS SHOWN

Drawing Title:

UTILITY PLAN

BID DOCUMENTS

Drawing No.



CERTIFICATE OF AUTHORIZATION No. 28312

REINFORCED CONCRETE

- RC-1 ALL CONCRETE DESIGN AND PLACEMENT SHALL BE IN STRICT ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," ACI 318.
- RC-2 STRUCTURAL CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
- RC-3 USE REGULAR WEIGHT CONCRETE. SUBMIT DESIGN MIX FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE. ALL MIX DESIGNS SHALL CLEARLY INDICATE INTENDED USE AND LOCATION.
- RC-4 STRUCTURAL CONCRETE SHALL CONFORM TO ACI 301 AND HAVE THE FOLLOWING SLUMPS & AGGREGATE REQUIREMENTS:
 - 5" <u>+</u> 1"

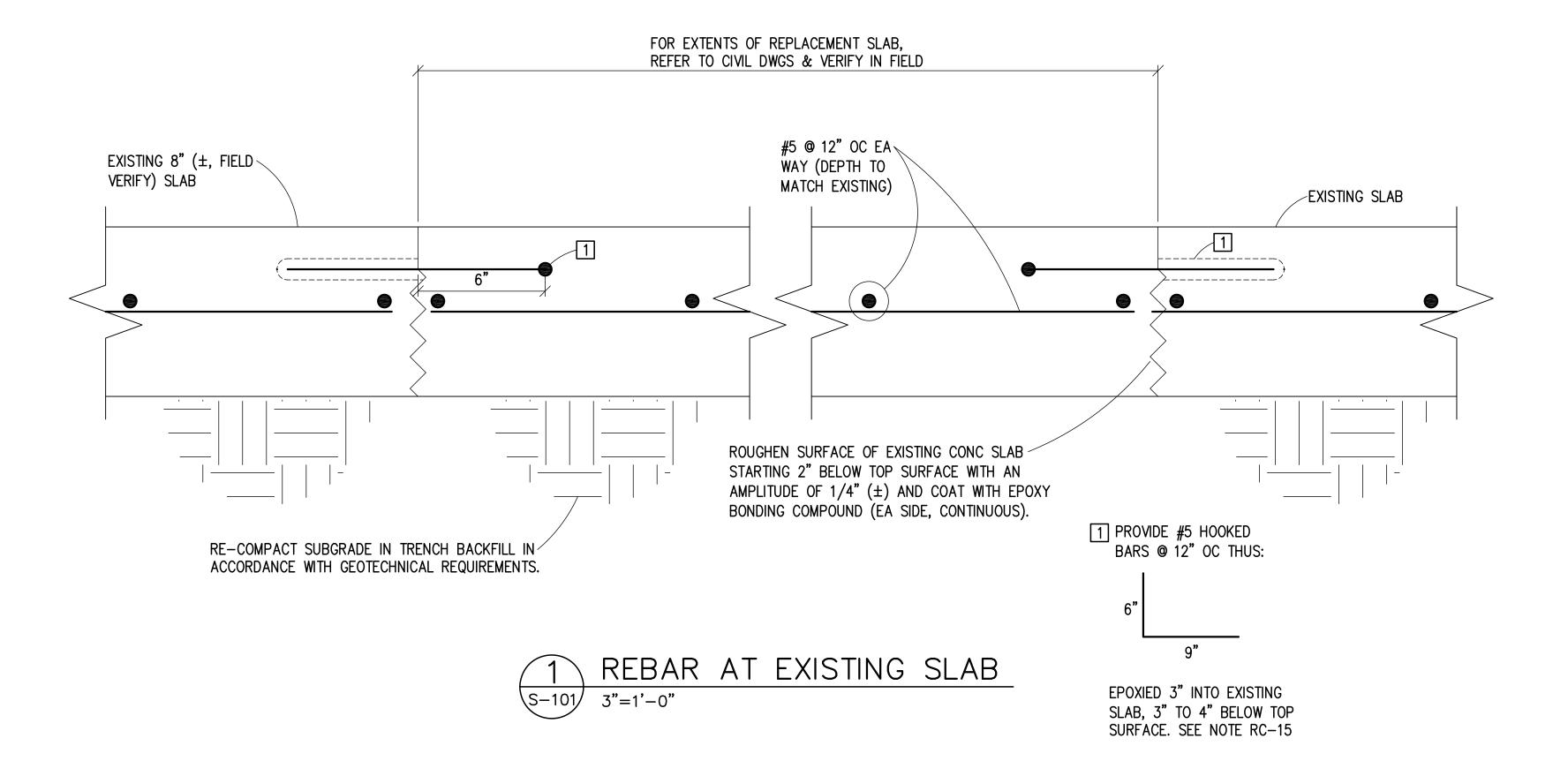
MAX. AGGREGATE ASTM #57

- RC-5 FLYASH, WHEN USED, SHALL BE LIMITED TO 20% OF THE CEMENTITIOUS MATERIAL.
- RC-6 ALL PUMPED CONCRETE WITH #57 AGGREGATE IS TO CONTAIN A HIGH RANGE WATER REDUCING AGENT. MINIMUM SIZE OF DISCHARGE TO BE 4" I.D.
- REINFORCING STEEL SHALL BE NEW DEFORMED BARS THAT ARE FREE FROM RUST, SCALE AND OIL AND CONFORM TO ASTM A615, GRADE 60, WITH MINIMUM YIELD STRENGTH = 60,000 PSI.
- RC-8 ALL SLABS ON GRADE SHALL BE REINFORCED WITH POLYPROPYLENE FIBERS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS AND SPECIFICATIONS.
- RC-9 LAP CONTINUOUS REINFORCING AS NOTED IN LAP SPLICE SCHEDULE. LAP CONTINUOUS BOTTOM STEEL OVER SUPPORT AND CONTINUOUS TOP STEEL AT MIDSPAN UNLESS OTHERWISE SPECIFIED.
- RC-10 TERMINATE ALL DISCONTINUOUS TOP BARS WITH STANDARD 90 DEGREE HOOK UNLESS NOTED
- AT CHANGES IN DIRECTION PROVIDE CORNER BARS OF SAME SIZE AND QUANTITY (U.N.O.) AS
- RC-12 NO REINFORCING BARS SHALL BE CUT TO ACCOMMODATE THE INSTALLATION OF ANCHORS. EMBEDS OR OTHER ITEMS.
- RC-13 ALL EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE PRIOR TO CONCRETE PLACEMENT.
- RC-14 PLACE CONCRETE PER ACI 304. USE MECHANICAL VIBRATION FOR ALL CONCRETE. LIMIT MAXIMUM FREE FALL DROP OF COLUMN OR WALL CONCRETE TO 3'-0". ALL PRECAUTIONS SHALL BE TAKEN TO AVOID SEGREGATION OF CONCRETE DURING PLACEMENT.
- RC-15 ADHESIVE SHALL HAVE UNCRACKED CONCRETE BOND STRENGTH OF 1385 PSI AND CRACKED CONCRETE BOND STRENGTH OF 710 PSI. INSTALLATION SHALL BE BY QUALIFIED PERSONNEL AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII). A COPY OF THE MPII SHALL BE ON SITE AND INSTALLATION SHALL BE OBSERVED BY A QUALIFIED INDEPENDENT INSPECTOR.
- RC-16 SAMPLING AND TESTING OF SPECIMENS FOR FIELD QUALITY CONTROL SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY. SAMPLES OF FRESH CONCRETE SHALL BE OBTAINED ACCORDING TO ASTM C172, ONE SET OF SAMPLES FOR EACH DAY'S PLACEMENT EXCEEDING 5 CUBIC YARDS, PLUS ONE SET FOR EACH ADDITIONAL 25 CUBIC YARDS. TESTING SHALL BE:

A. SLUMP: ASTM C 143

- B. CONCRETE TEMP: ASTM C 1064; TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEGREES F AND BELOW AND WHEN 80 DEGREES F AND ABOVE.
- C. COMPRESSIVE TEST SPECIMENS: ASTM C31; CAST AND LABORATORY CURE FOUR STANDARD CYLINDER SPECIMENS FOR EACH SAMPLE.
- D. COMPRESSIVE-STRENGTH TESTS: ASTM C39; TEST ONE CYLINDER AT 7 DAYS, TWO CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE.
- RC-17 CONTINUOUSLY CURE FRESH CONCRETE IN A MOIST ENVIRONMENT FOR SEVEN DAYS. SUBMIT CURING METHOD FOR APPROVAL BY THE ENGINEER PRIOR TO PLACING CONCRETE.

MIN LAP SPLICE LENGTH SCHEDULE									
BAR TYPE	BAR SIZE								
DAR TIPE	#3	#4	# 5	#6	# 7	#8	#9	#10	#11
FOOTINGS	16"	16"	19"	23"	33"	37"	42"	47"	53"
COLUMN	_	_	19"	23"	33"	39"	49"	60"	72"
WALLS	16"	16"	19"	23"	37"	47"	58"	70"	_
SLABS	16"	19"	28"	37"	60"	74"	_	_	_
BEAMS (TOP)	_	_	25"	29"	43"	51"	63"	78"	93"
BEAMS (MID & BOT)	_	_	19"	23"	33"	39"	49"	60"	72"
STIRRUPS	16"	16"	19"	23"				_	
FILLED CELLS	SEE MASONRY NOTES								



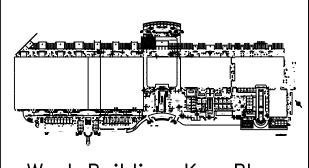


Matern Professional Engineering, Inc 130 Candace Drive Maitland, FI 32751-3331

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ORANGE COUNTY CONVENTION **WEST BUILDING GREASE TRAP** REPLACEMENT

CARL W. JENNE, PE 54036



West Building Key Plan

Revisions

No.	Date	Description				
1	7/21/15	ADDENDUM #1				

MPE PROJ#: 2014-140

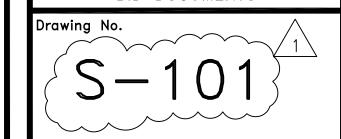
Designed By: CWJ Drawn By: RBJ

Checked By: CWJ Issue Date:

Drawing Scale: AS SHOWN

SLAB REPAIR |& GENERAL NOTES|

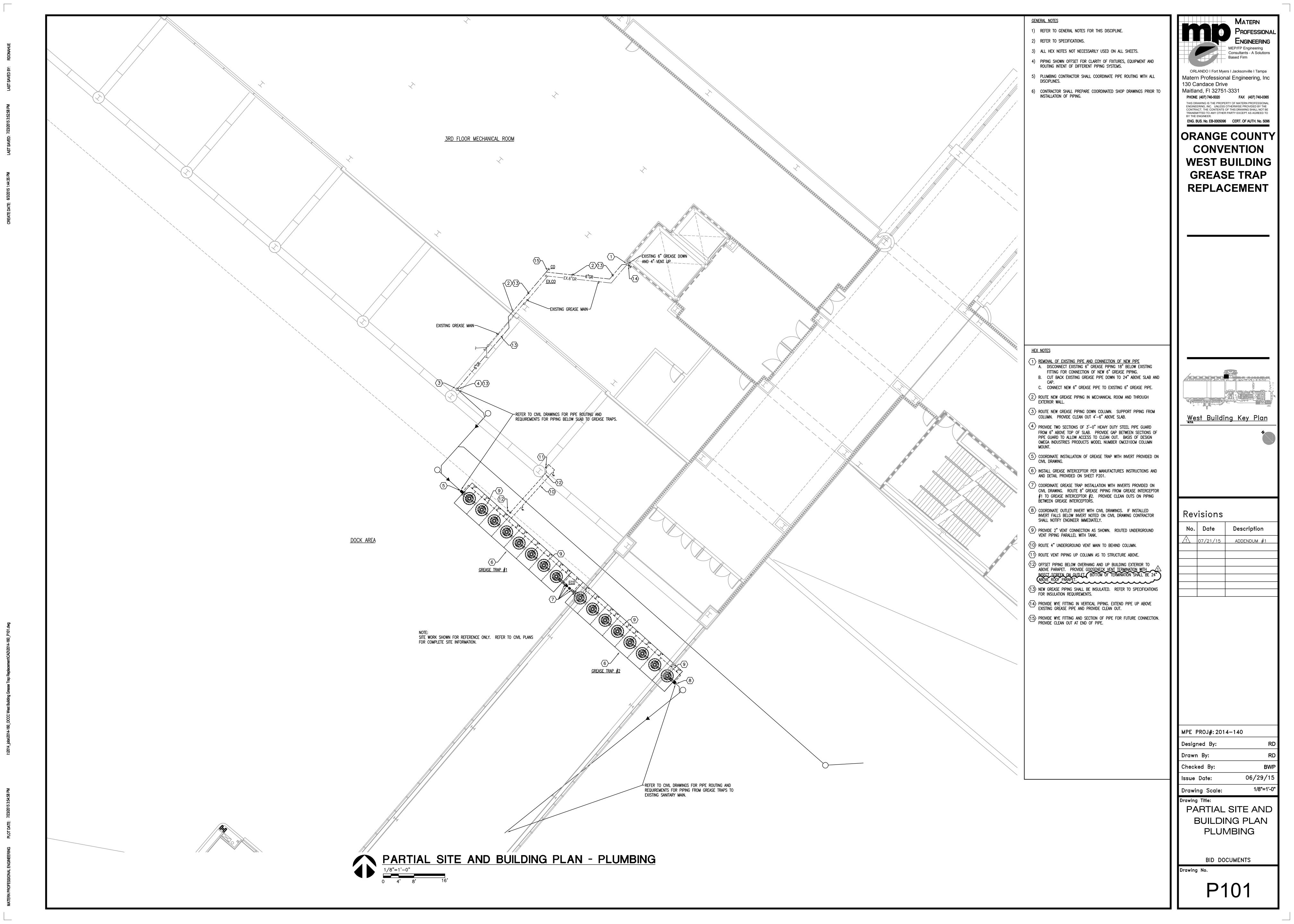
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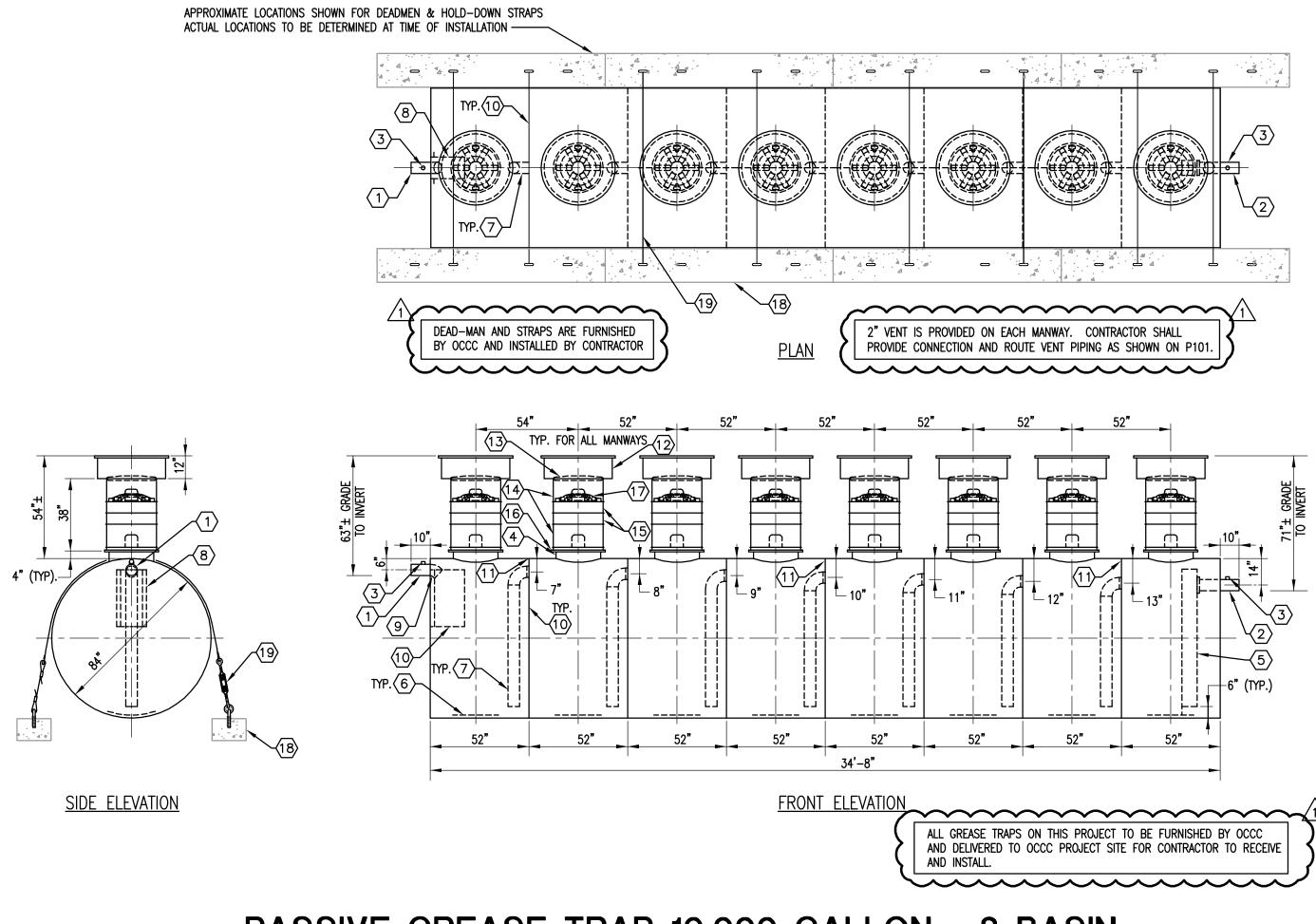
ALLAN and CONRAD, Inc.

CONSULTING STRUCTURAL ENGINEERS
1280 PALMETTO AVENUE (407) 628–5282

WINTER PARK, FLORIDA 32789 EB #767



2-WAY CLEANOUT DETAIL



1 6"ø SCH 40 PIPE STUB – INLET.

2 6"ø SCH 40 PIPE STUB – OUTLET.

 $\overline{3}$ 2" NPT HC FOR VENT.

4 24" MANWAY FOR STACKABLE RISER.

5 STEEL OUTLET DOWNCOMER BAFFLE WITH OPEN TOP FOR EFFLUENT SAMPLING.

6 χ " striker plate (at all manways)

 $\overline{7}$ 6" SCH 40 TRANSFER PIPE.

(8) BOLT — ON INLET DIFFUSION BAFFLE — 7 GA.

9 6"ø 45" DIFFUSION ELBOW.

(10) SOLID BULKHEAD - 1/4" (11) 2" OPENING FOR AIR CIRCULATION (TYPICAL).

12 36"0 GRADE - LEVEL MANWAY - SHIPPED LOOSE.

(13) 24"ø PVC COVER.

24" x 12" STACKABLE RISER — ALL STACKABLE RISER COMPONENTS ARE PRE — ASSEMBLED AND COMPLETE MANWAY RISER IS SHIPPED LOOSE.

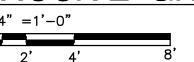
(15) 24"ø x6" STACKABLE RISER.

(16) STACKABLE RISER ADAPTER RING & GASKET.

(17) STACKABLE RISER SAFETY SCREEN. (18) CDA - 15 CONCRETE DEADMAN - EIGHT REQUIRED.

(8) POLYSTER HOLD – DOWN STRAPS.

PASSIVE GREASE TRAP 10,000 GALLON - 8 BASIN



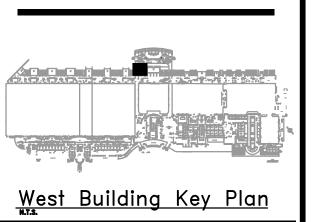
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ORANGE COUNTY CONVENTION **WEST BUILDING GREASE TRAP** REPLACEMENT



Revisions

No. Date Description 1 07/21/15 ADDENDUM #1

MPE PROJ#: 2014-140 Designed By: Drawn By: Checked By: 06/29/15

DETAILS PLUMBING

BID DOCUMENTS