

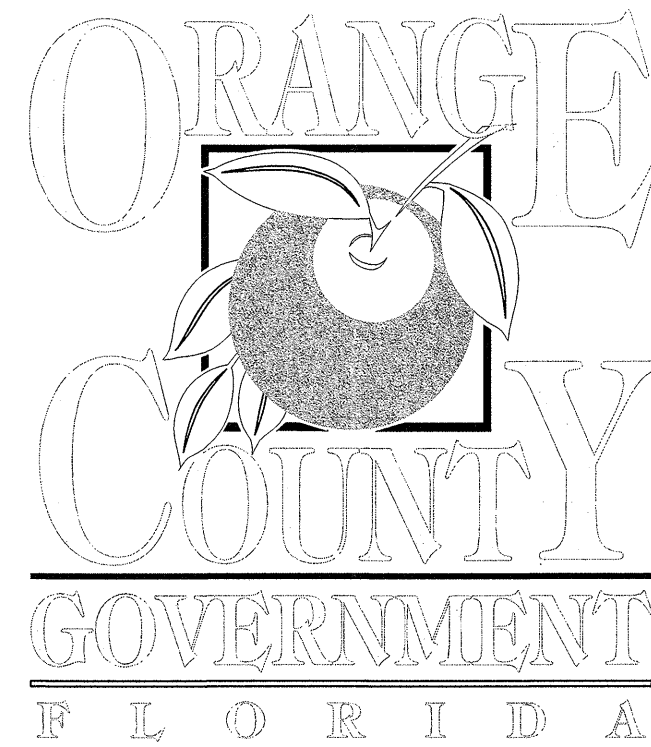
# ORANGE COUNTY UTILITIES

## PORTER TRANSFER STATION STEEL PLATE REPLACEMENT

CIP NO. 4410-038-1061-05-6310 SEQ NO. 91566

ORLANDO, FLORIDA

JUNE 2017

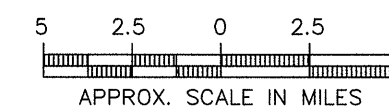
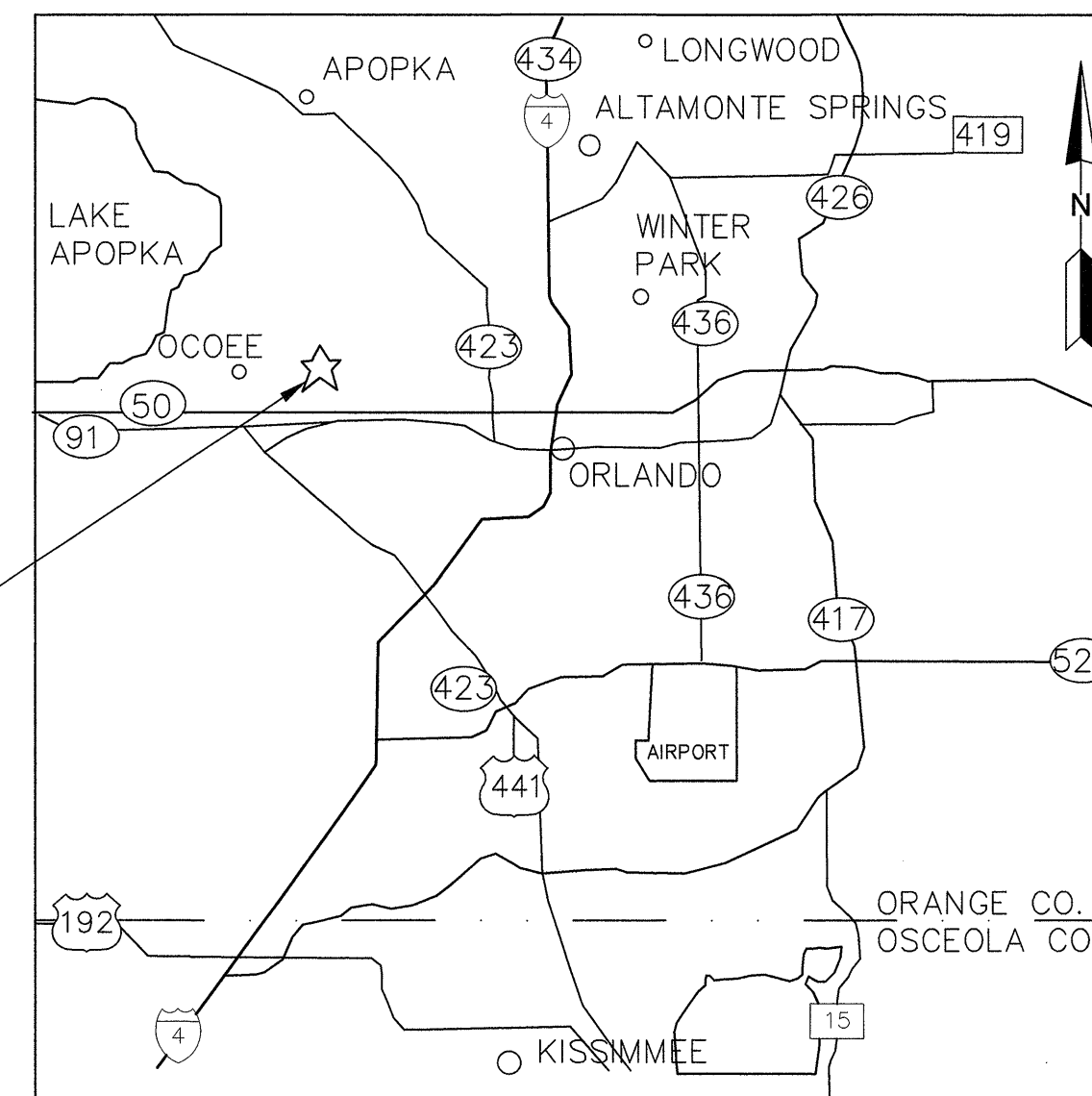


**GOVERNING OFFICIALS:**

TERESA JACOBS - ORANGE COUNTY MAYOR  
 BETSY VANDERLEY - COMMISSIONER, DISTRICT 1  
 BRYAN NELSON - COMMISSIONER, DISTRICT 2  
 PETE CLARKE - COMMISSIONER, DISTRICT 3  
 JENNIFER THOMPSON - COMMISSIONER, DISTRICT 4  
 EMILY BONILLA - COMMISSIONER, DISTRICT 5  
 VICTORIA P. SIPLIN - COMMISSIONER, DISTRICT 6  
 AJIT LALCHANDANI - COUNTY ADMINISTRATOR

RAY HANSON - DIRECTOR ORANGE COUNTY UTILITY DEPARTMENT  
 JAMES W. BECKER - MANAGER SOLID WASTE DIVISION

PROJECT  
LOCATION

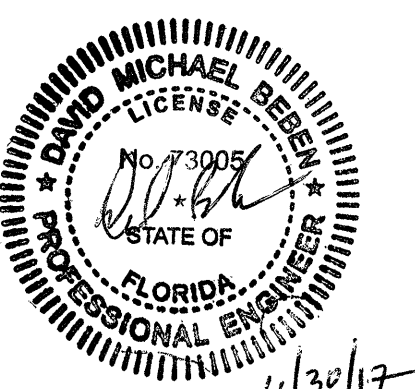


**LOCATION MAP**  
 PORTER TRANSFER STATION  
 1326 GOOD HOMES ROAD  
 ORLANDO, FL 32818

**SCS ENGINEERS**  
 STEARNS, CONRAD AND SCHMIDT  
 CONSULTING ENGINEERS, INC.  
 5850 SOUTH SEMORAN BLVD.  
 ORLANDO, FLORIDA 32822  
 PH. (407) 204-3231 FAX. (813) 623-6757  
 FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892  
 WWW.SCSENGINEERS.COM  
 SCS PROJECT NO. 09216054.01

**DRAWING INDEX**

DRAWING NO.	DRAWING TITLE
1	COVER SHEET
2	GENERAL NOTES
3	FLOOR PLAN
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ISSUED FOR BID  
 NOT FOR CONSTRUCTION

DAVID M. BEBEN, P.E.  
 LICENSE NO. 73005

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GENERAL NOTES

GENERAL

- 1. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE PRIOR TO COMMENCING WITH WORK. SPECIAL CARE SHALL BE GIVEN TO SITE LAYOUT THEREON. IN THE EVENT THE CONTRACTOR DISCOVERS AN ERROR, OMISSION, OR ANY OTHER POSSIBLE DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS OR SPECIFICATIONS, NOTIFICATION TO THE ENGINEER SHALL BE IMMEDIATELY MADE PRIOR TO PROCEEDING WITH WORK.
- 2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS AND SERVE AS NOTICE TO THE CONTRACTOR THAT UTILITIES EXIST. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING CONTRACTOR'S WORK PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED.
- 3. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, OR OTHERWISE ALTERED UNLESS APPROVED IN WRITING BY THE ENGINEER OF RECORD.
- 4. THE CONTRACT DRAWINGS REPRESENT THE FINISHED WALL PROTECTION SYSTEM AND DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCE AND SAFETY. THE ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 5. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF THE ENGINEER IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHALL NOT BE CONSTRUED AS EXHAUSTIVE OR A CONTINUOUS CHECK OF THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER AS A PERIODIC EFFORT TO GUARD THE OWNER AGAINST READILY APPARENT DEFECTS OF DEFICIENCIES IN THE WORK.
- 6. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY TO PROVIDE FOR WORKER SAFETY DURING ALL CONSTRUCTION INCLUDING DEMOLITION ACTIVITIES. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL TEMPORARY SCAFFOLDING, PLATFORMS, BARRICADES, LIGHTING, RAILINGS, SCREENING, ETC. NECESSARY TO PROTECT WORKERS, EXISTING FACILITIES, STRUCTURES AND THE PUBLIC DURING DEMOLITION AND ERECTION OF THE NEW CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONS TO MINIMIZE VIBRATION, NOISE, DUST AND DEBRIS IN ALL AREAS ADJACENT TO AREAS OF DEMOLITION.
- 7. UPON COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY THAT ANY POWER SYSTEMS (IF APPLICABLE) HAVE BEEN DE-ENERGIZED AND THAT ALL MECHANICAL/ELECTRICAL SYSTEMS HAVE BEEN MADE SAFE FOR CONSTRUCTION/DEMOLITION PERSONNEL.
- 8. CONTRACTOR SHALL PROVIDE ACCESS TO OWNER TO IDENTIFY SALVAGE ITEMS TO REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL REMOVE AND PLACE SUCH ITEMS IN A LOCATION AS DIRECTED BY THE OWNER.
- 9. ATTENTION IS DIRECTED TO THE FACT THAT AN ACTIVE MUNICIPAL SOLID WASTE TRANSFER STATION AND OTHER FACILITIES WILL BE IN OPERATION DURING THE CONSTRUCTION PERIOD. TRANSFER TRAILER TRUCKS WILL BE ACTIVE DURING NORMAL BUSINESS HOURS. THE CONTRACTOR SHALL NOT BLOCK TRANSFER TRAILER TRUCKS OR OTHER TRANSFER STATION ACTIVITIES WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER. IF NECESSARY, OR IF REQUESTED BY THE OWNER, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL TO MAINTAIN TRANSFER STATION OPERATIONS.
- 10. WORK SHALL BE PERFORMED IN TWO STAGES, BEGINNING WITH THE WEST BAY. ONCE THE WEST BAY IS COMPLETED, CONTRACTOR WILL MOVE TO EAST BAY. THE CONTRACTOR IS REQUIRED TO PERFORM THE WORK IN A MANNER WHICH MINIMIZES CONFLICT WITH THE OPERATIONS OF THE FACILITY DURING THE COURSE OF THE PROJECT. CONTRACTOR SHALL UTILIZE A TEMPORARY BARRICADE SEPARATING THE EAST AND WEST BAYS OF THE FACILITY AND IN THE TRANSFER TRAILER TUNNEL.

METAL FABRICATIONS

- 1. STEEL WORK SHALL CONFORM TO THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
- 2. MATERIAL SHALL CONFORM TO THE FOLLOWING, EXCEPT AS NOTED:  
PLATES AND THREADED RODS - ASTM A36
- 3. WELDING ELECTRODES FOR A36 STEEL SHALL BE E70XX.
- 4. AT ALL LOCATIONS WHERE NEW CONSTRUCTION WILL INTERFACE WITH EXISTING ELEMENTS, CUT THROUGH EXISTING STEEL ARMOR PLATING IN STRAIGHT AND TRUE LINES TO INSURE A NEAT INTERFACE.
- 5. NEW STEEL PLATE SHALL BE FABRICATED TO STRICT TOLERANCE OF THE EXISTING WALL GEOMETRY/CURVATURE. FIELD BENDING OF NEW PLATES SHALL BE ACCEPTED PROVIDED THAT NO CREASES OR SURFACE IRREGULARITIES DEVELOP.
- 6. THREADED RODS SHALL BE TIGHTENED USING THE "TURN OF THE NUT METHOD" (SNUG-TIGHT PLUS ½ TURN).

WELDING

- 1. WELDING SHALL BE DONE BY WELDERS WITH CURRENT CERTIFICATION USING ASTM E70 SERIES LOW HYDROGEN ELECTRODES FOR ALL WELDING OF HIGH STRENGTH STEELS.
- 2. WELDS SHOWN ON DRAWINGS ARE MINIMUM DESIGN REQUIREMENTS. THE FABRICATOR'S SHOP DRAWINGS SHALL REFLECT WELDS IN ACCORDANCE WITH AWS REQUIREMENTS.
- 3. UNLESS NOTED OTHERWISE ON THE DRAWINGS, GROOVE WELDS SHALL BE FULL PENETRATION.

CONCRETE WALL PREPARATION

- 1. AT ALL LOCATIONS WHERE THE EXISTING STEEL PLATE IS TO BE REMOVED AND REPLACED, THE FOLLOWING WORK SHALL BE CONDUCTED BY THE CONTRACTOR TO THE FACE OF THE EXISTING CONCRETE WALL AFTER REMOVAL OF THE EXISTING STEEL PLATE:
  - A. PREPARE THE FACE OF THE EXISTING CONCRETE WALL. CHIP THE FACE OF THE EXPOSED CONCRETE WALL TO REMOVE ANY LOOSE CONCRETE. DO NOT CHIP LOOSE CONCRETE MORE THAN A DEPTH OF 1-1/2" STARTING AT THE BACK FACE OF WHERE THE EXISTING STEEL PLATE WAS LOCATED PRIOR TO REMOVAL. NOTIFY ENGINEER IMMEDIATELY IF LOOSE CONCRETE IS FOUND MORE THAN 1-1/2" FROM THE BACK FACE OF WHERE THE EXISTING STEEL PLATE WAS LOCATED PRIOR TO REMOVAL. DO NOT PROCEED WITH DEMOLITION UNTIL APPROVAL HAS BEEN RECEIVED FROM ENGINEER.
  - B. PREPARE AND FILL THE VOID BETWEEN THE NEW STEEL PLATE AND THE PREPARED CONCRETE WALL SURFACE WITH CONCRETE GROUT INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND PER ACI CONCRETE REPAIR MANUAL (LATEST EDITION). ACCEPTED MANUFACTURERS AND PRODUCTS INCLUDE (OR ENGINEER APPROVED EQUAL):
    - a. CHEMREX EMACO S66 CI
    - b. SIKATOP 111PLUS
    - c. FOX INDUSTRIES FX-253

TIPPING FLOOR REPAIR

- 1. LOCATION AND EXTENT OF TIPPING FLOOR REMOVAL AT BASE OF NEW STEEL PLATE INSTALLATION TO BE APPROVED BY THE ENGINEER PRIOR TO CONTRACTOR CONDUCTING SAW CUTTING AND DEMOLITION OF THE TIPPING FLOOR.
- 2. REPAIR TIPPING FLOOR AT BASE OF NEW STEEL PLATE INSTALLATION IN ACCORDANCE WITH THE SPECIFICATIONS.



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SHEET TITLE  
**GENERAL NOTES**

PROJECT TITLE  
**STEEL PLATE REPLACEMENT PORTER TRANSFER STATION BID DRAWINGS**

CLIENT  
**ORANGE COUNTY UTILITIES DEPARTMENT  
ORLANDO, FLORIDA**

SCS ENGINEERS  
STEARNS, CONRAD AND SCHMIDT  
CONSULTING ENGINEERS  
5650 SOUTH SEMORAN BLVD., ORLANDO, FLORIDA 32822  
PH (407) 204-3231 FAX NO. (813) 623-6757  
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

DRAWN BY: KS/KKC  
O/A BY: SRP/CAR  
CHK BY: SRP  
APP BY: SRP

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DATE: 06/15/17  
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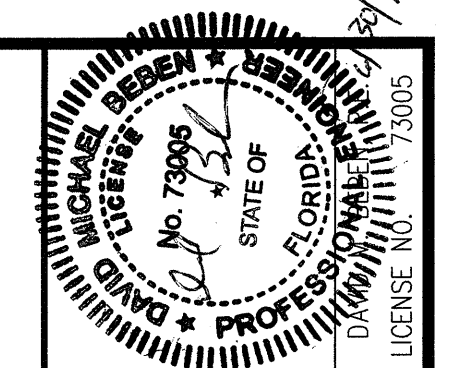
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**2**

SHEET  
**2** of **4**

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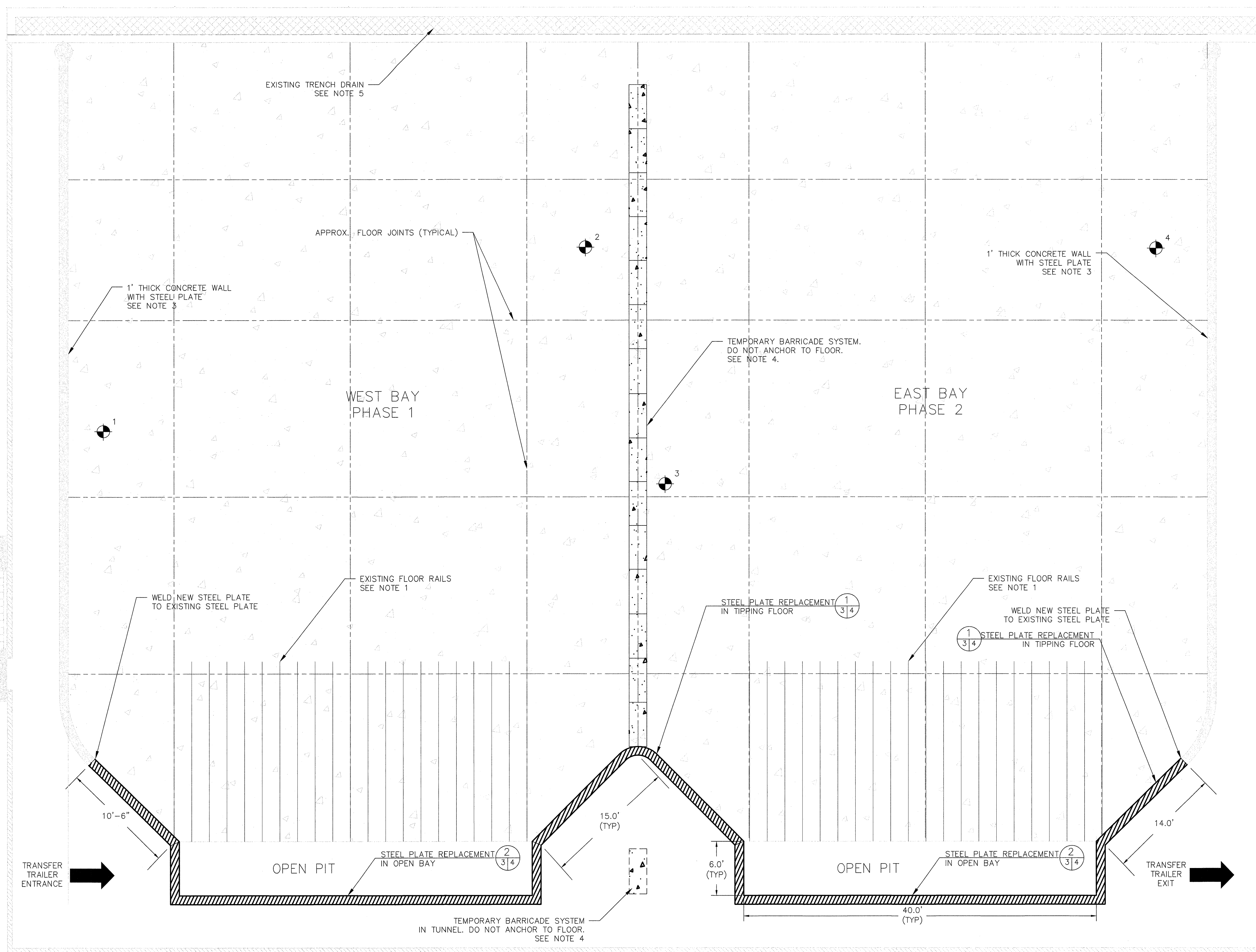
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SHEET TITLE	<b>FLOOR PLAN</b>
PROJECT TITLE	<b>STEEL PLATE REPLACEMENT PORTER TRANSFER STATION BID DRAWINGS</b>

CLIENT	<b>ORANGE COUNTY UTILITIES DEPARTMENT</b>
	<b>ORLANDO, FLORIDA</b>

<b>SCS ENGINEERS</b> STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS 5650 SOUTH SEMORAN BLVD., ORLANDO, FLORIDA 32822 PH (407) 244-3231 FAX NO. (813) 823-6757 FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892	O/A BY: SRF / CAR APP. BY: SRF DWA. BY: KS / KKC CHK. BY: SRF DMB
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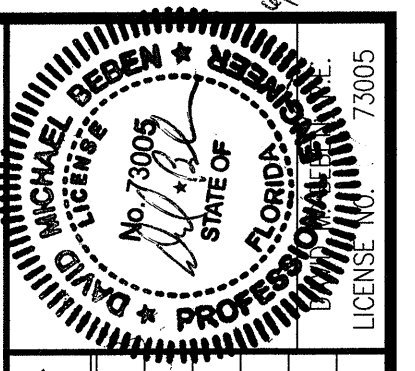
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SHEET	<b>3 of 4</b>



- NOTES:**
- DAMAGE OCCURRING TO EXISTING STEEL PLATES AND STRUCTURES THAT ARE NOT SELECTED FOR DEMOLITION AND/OR REPLACEMENT DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
  - EXISTING STEEL PLATE TO BE REMOVED AND REPLACED: CONCRETE BEHIND STEEL PLATE SHALL BE PREPARED PER SHEET 4 PRIOR TO INSTALLATION OF THE NEW STEEL PLATE. REMOVAL OF THE EXISTING STEEL PLATE SHALL BE EXECUTED WITHOUT DAMAGING THE EXISTING CONCRETE WALLS. REFER TO "CONCRETE WALL PREPARATION" SECTION OF THE GENERAL NOTES FOR REPAIR OF EXISTING CONCRETE WALL BEHIND NEW STEEL PLATE.
  - EXISTING STEEL PLATE TO REMAIN AND BE PROTECTED FROM DAMAGE: CONTRACTOR SHALL PROTECT EXISTING STEEL PLATE FROM DAMAGE RESULTING IN WARPING AND/OR ABRUPT SURFACE IRREGULARITIES. DAMAGE OCCURRING DURING CONSTRUCTION TO EXISTING STEEL PLATES AND STRUCTURES THAT ARE NOT SELECTED FOR DEMOLITION/REPLACEMENT SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL ENSURE A SMOOTH SURFACE TRANSITION FROM NEW STEEL PLATE TO THE ADJOINING, EXISTING STEEL PLATE.
  - CONTRACTOR SHALL UTILIZE A TEMPORARY CONCRETE JERSEY BARRIER SEPARATING THE WEST AND EAST BAYS (PHASES 1 AND 2) IN THE TIPPING FLOOR AND TRANSFER TRAILER TUNNEL. JERSEY BARRIERS HELD TOGETHER WITH METAL PINS. DO NOT ANCHOR TO TIPPING FLOOR.
  - CONTRACTOR SHALL PROTECT EXISTING TRENCH DRAIN DURING WORK FROM DAMAGE AND PROVIDE MEANS TO KEEP THE DRAIN FREE OF DUST AND DEBRIS.
  - CONTRACTOR SHALL COLLECT FOUR (4) - 4 INCH DIAMETER CORE SAMPLES FROM THE TIPPING FLOOR USING A HIGH-STRENGTH CORE BIT TO A DEPTH OF 13 INCHES. THE FINAL CORING LOCATIONS WILL BE DETERMINED BY THE ENGINEER AND OWNER. THE CORES WILL BE ANALYZED FOR THE CONCRETE'S DENSITY, ABSORPTION AND VOIDS IN ACCORDANCE WITH ASTM C642, TO DETERMINE THE COMPRESSIVE STRENGTH IN ACCORDANCE WITH ASTM C42, AND EVALUATED USING PETROGRAPHIC METHODS IN ACCORDANCE WITH ASTM C805. THE CONTRACTOR SHALL PREPARE A REPORT SUMMARY OF OBSERVATIONS, TEST RESULTS AND EVALUATION OF THE TIPPING FLOOR CONDITION.
  - REPAIR TIPPING FLOOR CORINGS ACCORDING TO SPECIFICATIONS.

**LEGEND:**  
 PROPOSED CONCRETE CORE LOCATION TYP. OF FOUR. SEE NOTES 6 AND 7.

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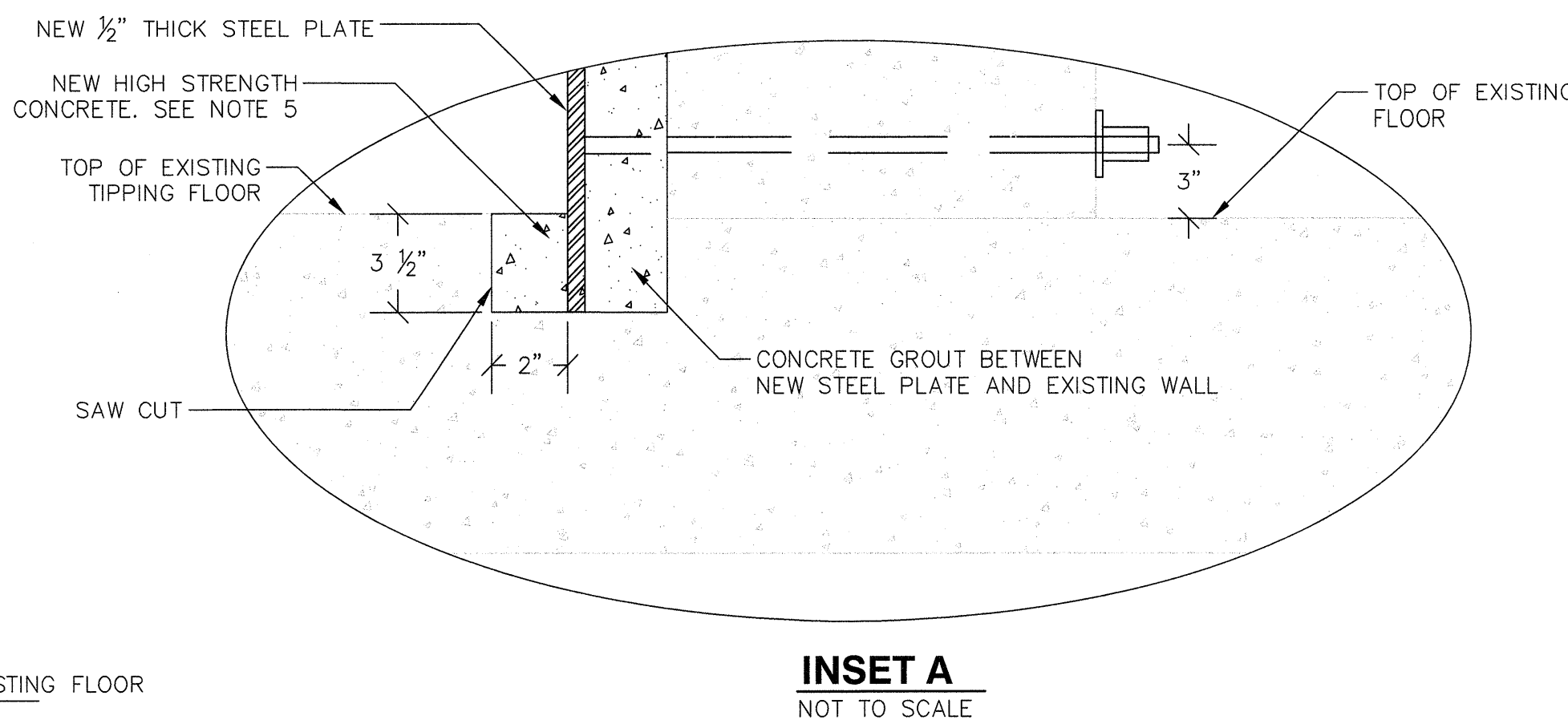
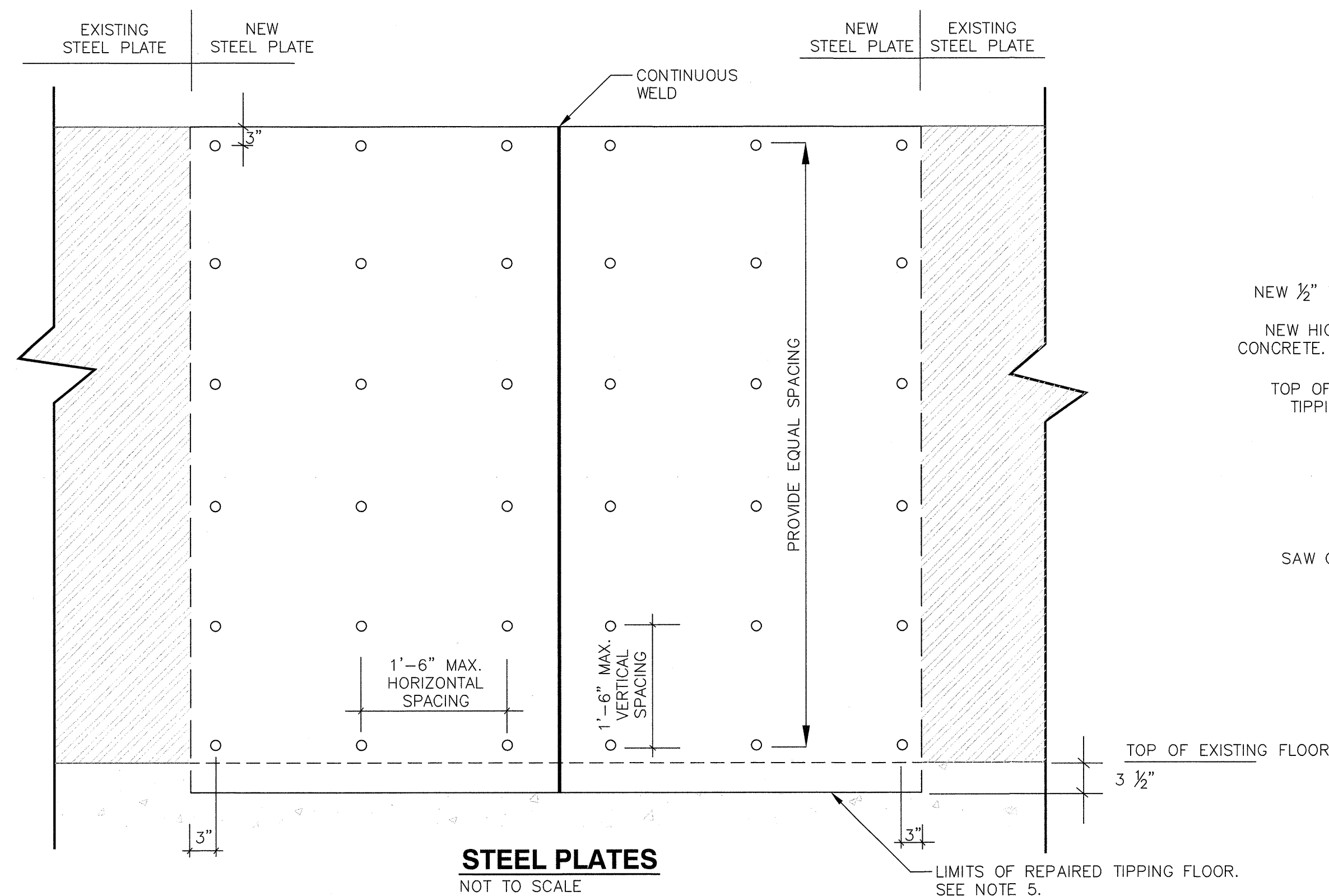
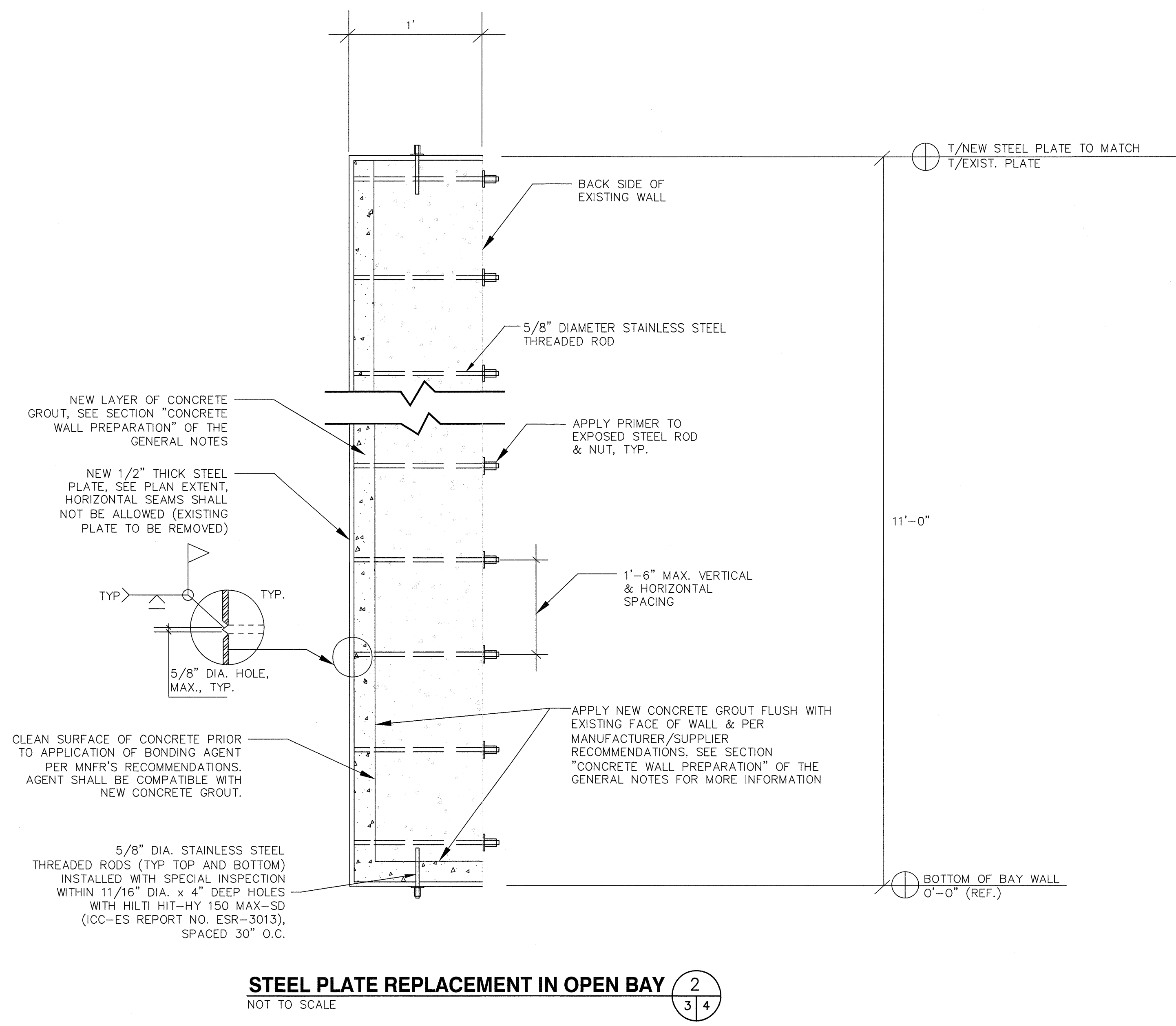
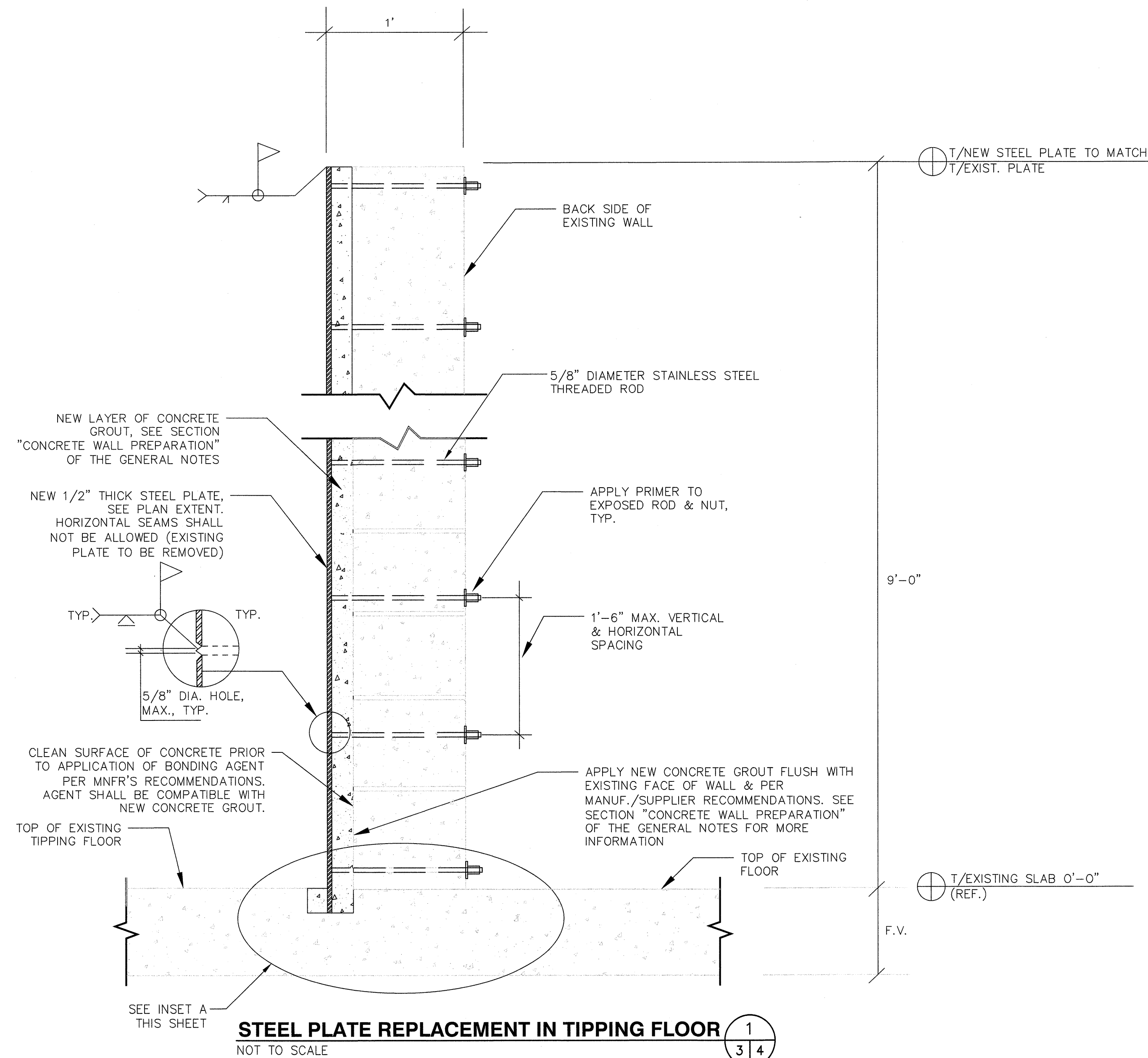
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SHEET TITLE	<b>DETAILS</b>
PROJECT TITLE	<b>STEEL PLATE REPLACEMENT BID DRAWINGS</b>

CLIENT	<b>ORANGE COUNTY UTILITIES DEPARTMENT</b>
	<b>ORLANDO, FLORIDA</b>

<b>SCS ENGINEERS</b> STEARN, CONRAD AND SCHMIDT CONSULTING ENGINEERS 5850 SOUTH SEMORAN BLVD., ORLANDO, FLORIDA 32822 PH (407) 204-3231 FAX NO. (813) 623-6757	DATE: JUNE 2017
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892 OWN. BY: KS/KKC CHK. BY: SRF APP. BY: SRF	CADD FILE: C-2_CAR

SCALE: AS SHOWN
DRAWING NO. <b>4</b>
SHEET <b>4</b> of <b>4</b>



**NOTES:**

- AFTER REMOVAL OF SECTION OF EXISTING STEEL PLATE AND BOLTS, CHIP EXPOSED WALL CONCRETE AROUND DAMAGED AREAS, AREAS OF BRITTLE CONCRETE, UNDULATIONS IN THE CONCRETE AND OTHER AREAS REQUIRING REPAIRS. CLEAN THE FINAL SURFACE AND APPLY BONDING AGENT PER MANUFACTURERS RECOMMENDATIONS BEFORE INSTALLING NEW STEEL PLATE. DO NOT CHIP LOOSE CONCRETE MORE THAN A DEPTH OF 1-1/2" STARTING AT THE BACK FACE OF WHERE THE EXISTING STEEL PLATE WAS LOCATED PRIOR TO REMOVAL. NOTIFY ENGINEER IMMEDIATELY IF LOOSE CONCRETE IS FOUND MORE THAN 1-1/2" FROM THE BACK FACE OF WHERE THE EXISTING STEEL PLATE WAS LOCATED PRIOR TO REMOVAL. DO NOT PROCEED WITH DEMOLITION UNTIL APPROVAL HAS BEEN RECEIVED FROM ENGINEER.
- CONTRACTOR TO SUBMIT TO ENGINEER PROPOSED MEANS AND METHODS TO INSTALL CONCRETE GROUT BETWEEN NEW STEEL PLATE AND PREPARED EXISTING WALL. DO NOT BEGIN CONCRETE GROUT PLACEMENT UNTIL PROCEDURES HAVE BEEN REVIEWED BY ENGINEER.
- CONTRACTOR TO USE EXISTING ANCHOR BOLT HOLES FOR NEW STEEL PLATE TO THE MAXIMUM EXTENT POSSIBLE. PHASE 1 (WEST BAY) HAS NO ANCHOR BOLTS. PHASE 2 (EAST BAY) HAS EXISTING ANCHOR BOLTS WITH THE POTENTIAL FOR RE-USE OF THE HOLES. IN THE EVENT THAT NEW HOLES ARE REQUIRED, DRILL 5/8" DIAMETER HOLES. CONTRACTOR TO EXERCISE EXTREME CAUTION NOT TO DRILL THROUGH EXISTING CONCRETE REINFORCEMENT AND ELECTRICAL CABLES.
- REFER TO THE "METAL FABRICATIONS" SECTION OF THE GENERAL NOTES AND SPECIFICATIONS FOR TOLERANCES.
- REMOVE 3-1/2" DEEP X 2" WIDE SECTION OF EXISTING SURFACE SLAB ALONG BASE OF EXISTING STEEL PLATE AND AS SHOWN ON THE SITE PLAN, IN ORDER TO FACILITATE NEW STEEL PLATE INSTALLATION. REPLACE SLAB TO ORIGINAL GRADE WITH 8,000 PSI (MIN.) CONCRETE MIX CONTAINING GRANITE AGGREGATE AND METAL FIBERS. APPLY BONDING AGENT TO EXISTING CONCRETE SURFACE PRIOR TO PLACING NEW CONCRETE TOPPING PER SPECIFICATIONS.
- ESTIMATED ANCHOR BOLTS (CONTRACTOR TO VERIFY):  
WEST BAY: 341 NEW 12" ANCHOR BOLTS TO BE DRILLED THROUGH WALL  
50 NEW 4" ANCHOR BOLTS TO BE DRILLED THROUGH WALL (TOP-BOTTOM IN TUNNEL)  
EAST BAY: 66 NEW 12" ANCHOR BOLTS TO BE DRILLED THROUGH WALL  
275 EXISTING 12" ANCHOR BOLT HOLES TO BE REUSED  
50 NEW 4" ANCHOR BOLTS TO BE DRILLED THROUGH WALL (TOP-BOTTOM IN TUNNEL)
- CONTRACTOR SHALL NOT REUSE THREADED RODS, WASHERS, OR NUTS FOR PLACEMENT OF NEW STEEL PLATE. NEW THREADED RODS, WASHERS, AND NUTS SHALL BE USED PER SPECIFICATIONS.