

RAINBOW LAKES ESTATES

Road Improvement Plans FY 24/25

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY ARE USING THE LATEST APPROVED "PERMITTED" PLANS PRIOR TO BEGINNING CONSTRUCTION.

- KEY MAP**
NOT TO SCALE

CITIZEN'S STANDARDS FOR ASSESSMENT / MSTU ROAD DESIGN AND CONSTRUCTION - BOCC POLICY 09-01

F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS, LATEST REVISION

F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST REVISION









MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION

MARION COUNTY LAND DEVELOPMENT CODE, LATEST REVISION

SHEET NUMBER	DRAWING DESCRIPTION
1	COVER SHEET
2	MAP 1
3	MAP 2
4	MAP 3
5	MAP 4
6	MAP 5
7	TYPICAL SECTION & DETAILS
8	SUMMARY OF QUANTITIES

UTILITY COMPANY	CONTACT PERSON	PHONE NUMBER
SECO ELECTRIC	JERRY BOLDUC	(352) 274-2896
AT&T (TELEPHONE)	RICK MARINO	(352) 796-0178
COMCAST CABLE	SCOTT OSEBOLD	(352) 287-7620
MARION COUNTY UTILITIES - WATER	MAIN OFFICE	(352) 307-6000
SEWER	NO SERVICE PROVIDED	
NATURAL GAS	NO SERVICE PROVIDED	

DISTRICT 1 - CRAIG CURRY
DISTRICT 2 - KATHY BRYANT, CHAIRMAN
DISTRICT 3 - MATT MCCLAIN
DISTRICT 4 - CARL ZALAK III
DISTRICT 5 - MICHELLE STONE
COUNTY ADMINISTRATOR - MOUNIR BOUYOUNES
PROJECT COORDINATOR - PETE HODGES

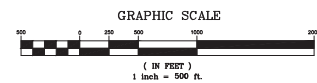
-  = EXISTING 2012 MSBU PROGRAM (COMPLETE)
 -  = EXISTING 2014 MSBU PROGRAM (COMPLETE)
 -  = EXISTING 2016 MSBU PROGRAM (COMPLETE)
 -  = EXISTING 2019 MSBU PROGRAM (COMPLETE)
 -  = EXISTING 2022 MSBU PROGRAM (COMPLETE)
 -  = EXISTING 2023 MSBU PROGRAM (COMPLETE)
 -  = 2025 MSBU ROAD IMPROVEMENTS (RECLAIM)
 -  = TRUCK ROUTE FOR IMPROVEMENT
- BY M.C. TRANS. DEPT.


	LINEAR FEET	MILES
MAP 1	----	----
MAP 2	7,701.59	1.46
MAP 3	----	----
MAP 4	8,058.43	1.52
MAP 5	----	----
GROSS LENGTH OF PROJECT	15,760.02	2.98

Plans Prepared By:

MWR
MICHAEL W. RADCLIFFE ENGINEERING, INC.
2611 S.E. Lake Weir Avenue Ocala, Florida 34471
Phone: (352)629-5500 Fax: (352)629-1010

Revisions to Plan Set
THIS DATE INDICATES THE LATEST DATE AT WHICH ANY
PART OF THIS PLAN SET WAS REVISED.
Date: 04-29-2025



-  = EXISTING 2012 MSBU PROGRAM (COMPLETE)
-  = EXISTING 144 MSBU PROGRAM (COMPLETE)
-  = EXISTING 2016 MSBU PROGRAM (COMPLETE)
-  = EXISTING 2019 MSBU PROGRAM (COMPLETE)
-  = EXISTING 2022 MSBU PROGRAM (COMPLETE)
-  = EXISTING 2023 MSBU PROGRAM (COMPLETE)
-  = 2025 MSBU ROAD IMPROVEMENTS (RECLAIM)
-  = TRUCK ROUTE FOR IMPROVEMENT

BY M.C. TRANS. DEPT.





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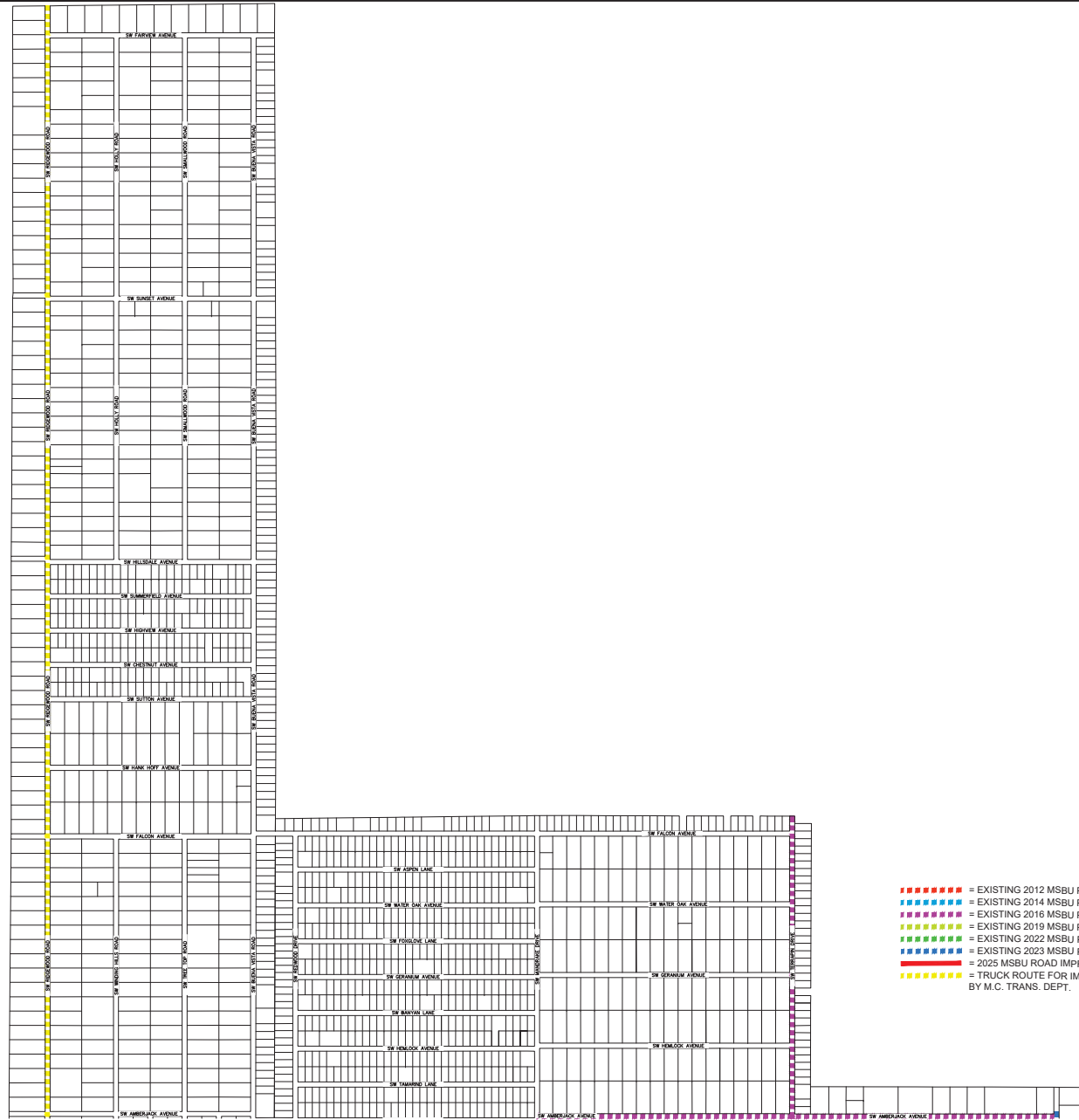
MATCH MAP 5

GRAPHIC SCALE

(IN FEET)
1 inch = 500 ft.

-  = EXISTING 2012 MSBU PROGRAM (COMPLETE)
 = EXISTING 2014 MSBU PROGRAM (COMPLETE)
 = EXISTING 2016 MSBU PROGRAM (COMPLETE)
 = EXISTING 2019 MSBU PROGRAM (COMPLETE)
 = EXISTING 2022 MSBU PROGRAM (COMPLETE)
 = EXISTING 2023 MSBU PROGRAM (COMPLETE)
 = 2025 MSBU ROAD IMPROVEMENTS (RECLAIM)
 = TRUCK ROUTE FOR IMPROVEMENT
 BY M.C. TRANS. DEPT.

MATCH MAP 1



MATCH MAP 3

Sheet No.
6 of 8

Leveling and Overlay Specifications:

PAVEMENT PREPARATION: PRIOR TO ANY OVERLAY OF EXISTING PAVEMENT, GRASS OR WEEDS OVERGROWING THE EDGES OF THE ROADWAY SHALL BE BLADED OFF TO DEFINE THE EDGE, AND CLEANED SUFFICIENTLY TO ACCEPT THE OVERLAY. EDGE BLADING SHALL INCLUDE A PROPER TRANSITION TO THE SHOULDER IN THE ABSOLUTE MINIMUM DISTANCE NECESSARY. THE EXISTING PAVEMENT SHALL BE BLADED OFF TO DEFINE THE EDGE AND CLEANED SUFFICIENTLY TO ACCEPT THE OVERLAY. EDGE BLADING WILL INCLUDE A PROPER TRANSITION TO THE SHOULDER IN THE ABSOLUTE MINIMUM DISTANCE NECESSARY.

CRACKS UNDER 1/4" IN WIDTH SHALL BE FILLED BY THE APPLICATION OF RS-1 OR RS-2 SPECIFIED FOR THE TACK COAT WHICH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THAT ITEM.

MEASUREMENT FOR THIS WORK SHALL BE AS PER THE PLAN QUANTITY UNLESS A REVISION IN THE LENGTH OF ROADWAY INVOLVED IS AUTHORIZED. PAYMENT FOR THIS WORK WHICH INCLUDES FILLING OF CRACKS 1/4" OR GREATER, POTHOLE PATCHING, EXPOSING AND CLEANING EDGE OF PAVEMENT, MINIMUM TAPERING OF THE SHOULDER, AND CLEANING THE ENTIRE PAVEMENT SHALL BE DONE AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR PAVEMENT PREPARATION. LEVELING COURSE SHALL BE APPLIED TO ALL AREAS INDICATED IN THE PLANS OR BY PROJECT MANAGER AND TO THE THICKNESS AND DIMENSIONS AS SHOWN IN THE PLANS OR DETERMINED BY THE PROJECT MANAGER. TACK COAT OR PRIME COAT FOR THE LEVELING COURSE IS CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT BE A SEPARATE PAY ITEM.

MEASUREMENT SHALL BE PER PLAN QUANTITY UNLESS ADDITIONAL AREAS NOT SHOWN ON THE PLANS ARE DESIGNATED BY THE ENGINEER OR PROJECT MANAGER. PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER TON.

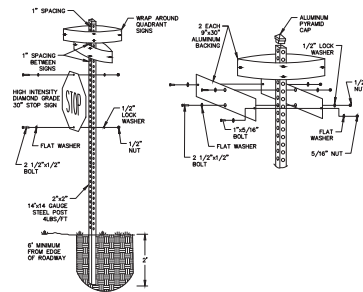
PAVEMENT OVERLAY: THE OVERLAY SHALL CONSIST OF ONE OR MORE OF THESE OPERATIONS:

A. APPLICATION OF AN ASPHALTIC CONCRETE OVERLAY OF SPECIFIED THICKNESS AND TYPE.

MEASUREMENT SHALL BE AS PER PLAN QUANTITIES EXCEPT AS CHANGED DUE TO MODIFICATIONS IN THE LENGTH OR WIDTH OF OVERLAY PLACEMENT. PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER SQUARE YARD OF ASPHALTIC CONCRETE OVERLAY.

TACK COAT: ASPHALT EMULSIONS FOR TACK COAT SHALL CONSIST OF A80, A90, A90H, RS-2 OR SPECIAL M.S. OTHER REQUIREMENTS FOR THE ASPHALT EMULSIONS OF TACK COAT SHALL BE IN ACCORDANCE WITH SECTIONS 300 AND 916 OF THE CURRENT F.D.O.T. SPECIFICATIONS.

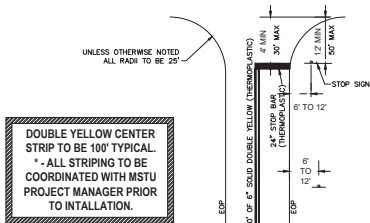
THE APPLICATION OF TACK AS A TYPE OF CRACK RELIEF LAYER OVER EXISTING PAVEMENTS SHALL BE BY APPLICATION HEAVY ENOUGH TO FULFILL THAT PURPOSE. THE RATE OF APPLICATION OF TACK PLACED OVER EXISTING PAVEMENT PRIOR TO APPLICATION OF OVERLAY SHALL ALSO BE AT A RATE TO BE DETERMINED DURING APPLICATION.



STREET NAME AND STOP SIGN INSTALLATION



TYPICAL REGULATORY AND WARNING SIGNS

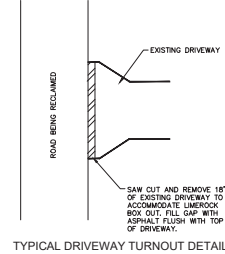


TYPICAL INTERSECTION DETAIL

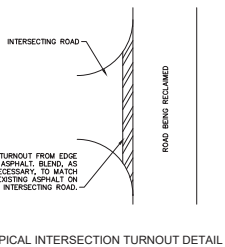
Standards for Overlaying Existing Asphalt Roadways

PAVEMENT PREPARATION:

- PRIOR TO ANY OVERLAY OF EXISTING PAVEMENT, GRASS OR WEEDS OVERGROWING THE EDGES OF THE ROADWAY SHALL BE BLADED OFF TO DEFINE THE EDGE AND CLEANED SUFFICIENTLY TO ACCEPT THE OVERLAY.
- EDGE BLADING WILL INCLUDE A PROPER TRANSITION TO THE SHOULDER IN THE ABSOLUTE MINIMUM DISTANCE NECESSARY.
- MATERIALS RESULTING FROM THE BLADING OPERATION WILL BE DISPOSED OF BY THE CONTRACTOR OFFSITE OF THE PROJECT ONLY WHEN THE DESIGN ENGINEER OR PROJECT MANAGER HAS DETERMINED THAT SUCH MATERIAL WILL NOT BE NEEDED.
- THE ROADWAY WILL BE BROOMED AND ALL HOLES AND CRACKS 1/4" OR OVER FILLED.
- MATERIAL USED FOR FILLING CRACKS OVER 1/4" IN WIDTH WILL BE HOT-POURED, WITH THE APPROVAL OF THE DESIGN ENGINEER, A LEVELING COURSE MAY ALSO BE REQUIRED.
- ALL WORK MENTIONED ABOVE WILL BE INCLUDED IN THE PAY ITEM FOR PAVEMENT PREPARATION.
- CRACKS LESS THAN 1/4" IN WIDTH WILL BE FILLED BY THE APPLICATION OF RS-1 OR RS-2 SPECIFIED FOR THE TACK COAT WHICH WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THAT ITEM.
- MILLING ACROSS THE FRONT OF DRIVEWAYS WILL BE DONE IN A MANNER IN WHICH THE ASPHALT WILL MATCH THE EXISTING DRIVEWAY SURFACE.
- MATERIALS INCLUDING THE REMOVAL AND DISPOSAL OF ALL RESULTING MATERIALS IS INCLUDED IN THE PAY ITEM OF PAVEMENT PREPARATION.
- MEASUREMENT FOR ALL AFOREMENTIONED WORK WILL BE AS PER THE PLAN QUANTITY UNLESS A REVISION IN THE LENGTH OF THE ROADWAY INVOLVED IS AUTHORIZED. PAYMENT FOR THIS WORK WHICH INCLUDES FILLING OF CRACKS 1/4" OR GREATER, EXPOSING AND CLEANING EDGE OF PAVEMENT, MINIMUM TAPERING OF THE SHOULDER, MILLING TO MATCH EXISTING DRIVEWAYS AND CLEANING THE ENTIRE PAVEMENT SHALL BE DONE AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR PAVEMENT PREPARATION.
- ASPHALT OVERLAY WILL CONSIST OF A MINIMUM OF 1-3/4" ASPHALT TYPE SP-8.5 WITH MAXIMUM OF 10% RECLAIM MIX.
- PAVEMENT PREPARATION INCLUDES BROOMING OF ASPHALT, CLIPPING OF GRASS OFF EDGE OF EXISTING ASPHALT CRACK SEALING OF CRACKS 1/4" OR WIDER, MILLING ACROSS FRONT OF DRIVEWAYS SO ASPHALT WILL MATCH DRIVEWAY AND REMOVAL OF MILLING. PAY ITEM WILL BE PER SQUARE YARD.



TYPICAL DRIVEWAY TURNOUT DETAIL

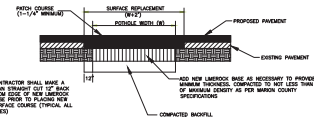


TYPICAL INTERSECTION TURNOUT DETAIL

Standards for Reclamation of Existing Paved Roads

STANDARDS FOR RECLAMATION OF EXISTING PAVED ROADS WILL CONSIST OF:

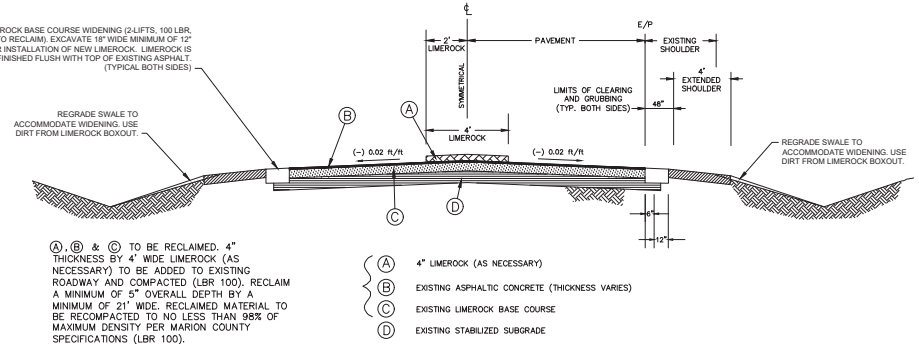
- MEASUREMENT TO ESTABLISH CENTERLINE (C/L) AND EDGE OF EXISTING PAVEMENT.
- MAINTAIN EXISTING EDGE OF PAVEMENT GRADE TO MATCH EXISTING DRIVEWAYS.
- ADD 4" OF LIMEROCK 4" WIDE TO CENTERLINE (C/L) TO MAINTAIN 2% GRADE TO EDGE.
- MIX EXISTING ASPHALT AND LIMEROCK TO A DEPTH OF 4-6" TO TAKE OUT ANY FRACTURE OF LIMEROCK.
- FINISH GRADE LIMEROCK AND COMPACT TO 98% DENSITY.
- PRIME LIMEROCK.
- PAVE WITH A MINIMUM OF 1-3/4" OF TYPE SP-8.5 ASPHALT.
- 500 ANY AREAS DISTURBED DURING CONSTRUCTION.
- DRIVEWAYS OR PAVED APPROACHES ARE NOT CONSTRUCTED DURING THIS PROCESS; EXISTING DRIVEWAYS WILL BE MATCHED TO PAVEMENT EDGE.



1. UNLESS OTHERWISE SPECIFIED, MATERIALS AND METHODS OF OPERATION REQUIRED TO INSTALL NEW AND REPLACEMENT PAVEMENT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THE LAND DEVELOPMENT CODE OF MARION COUNTY.
2. PAVEMENT SHALL BE REMOVED TO NEATLY SAWED STRAIGHT EDGES.
3. BACKFILL SHALL BE IN ACCORDANCE WITH APPENDIX B.2.1. QUALITY CONTROL.
4. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
5. THE TYPE AND THICKNESS OF THE NEW SURFACE MATERIAL SHALL BE CONSISTENT WITH THAT OF THE EXISTING SURFACE BUT IN ALL CASES SHALL MEET THE MINIMUM STANDARDS ESTABLISHED BY THE PLANS AND SPECIFICATIONS.

POTHOLE REPAIR DETAIL

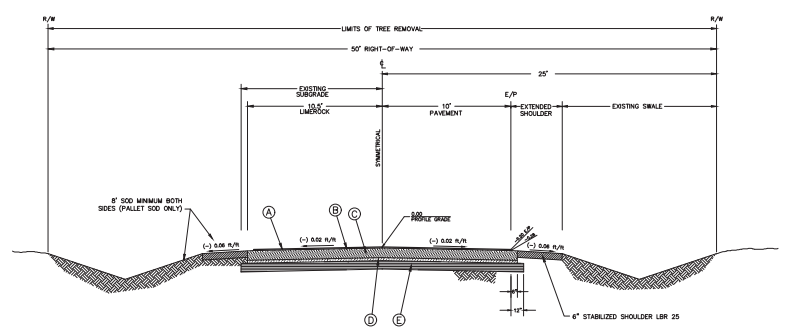
ALTERNATE: FOR SHALLOW POTHOLES, CONTRACTOR MAY CLEAN THEM & PROVIDE LEVELING SKIM COURSE



- A, B & C TO BE RECLAIMED. 4" THICKNESS BY 4" WIDE LIMEROCK (AS NECESSARY) TO BE ADDED TO EXISTING ROADWAY AND COMPACTED (LBR 100). RECLAIM A MINIMUM OF 5" OVERALL DEPTH BY A MINIMUM OF 21" WIDE. RECLAIMED MATERIAL TO BE RECOMPACTED TO NO LESS THAN 98% OF MAXIMUM DENSITY PER MARION COUNTY SPECIFICATIONS (LBR 100).
- RE-GRADE TO RE-ESTABLISH ROAD CROWN.
- RECLAIM DEPTH MAY BE ADJUSTED BASED ON FIELD CONDITIONS AS DIRECTED BY MSTU PROJECT MANAGER

- A 4" LIMEROCK (AS NECESSARY)
- B EXISTING ASPHALTIC CONCRETE (THICKNESS VARIES)
- C EXISTING LIMEROCK BASE COURSE
- D EXISTING STABILIZED SUBGRADE

TYPICAL SECTION WIDENING AND RECLAMATION PROCESS



- A 1-1/4" ASPHALTIC CONCRETE (COMPACTED, TYPE SP-8.5)
- B BITUMINOUS PRIME COAT
- C MINIMUM 5" RECLAIMED BASE COURSE (LBR 100)
- D EXISTING LIMEROCK BASE COURSE
- E EXISTING STABILIZED SUBGRADE

TYPICAL SECTION RECLAIMED BASE

Project Name	Project No.	Revision
Client	Drawn	Check
Scale	Date	Sheet No.

Project Name	Project No.	Revision
Client	Drawn	Check
Scale	Date	Sheet No.

MICHAEL W. RADLIEFF ENGINEERING, INC.
 1000 N. 10TH AVE., SUITE 100, OMAHA, NE 68102
 PHONE: 402.466.1111 FAX: 402.466.1112
 WWW.MWRADLIEFF.COM

Typical Section and Details

Sheet No. 7 of 8

[illegible]

SY	SQUARE YARD
TN	TON
EA	EACH
LF	LINEAR FOOT
MI	MILE