

Golden Gate City Stormwater

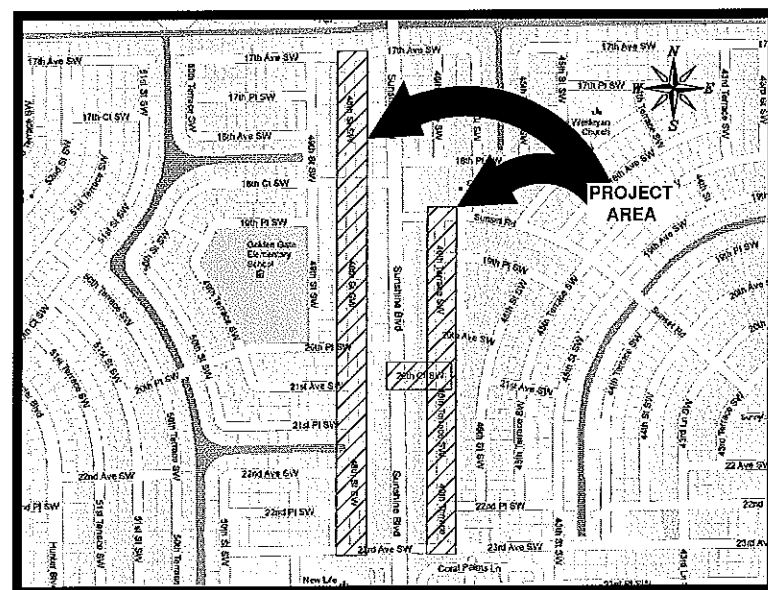
In Conjunction with Sidewalk Improvements 20th Ct.SW, 46th Terr. SW, & 48th St. SW

Located in Collier County
Section 21-22, Township 49 South, Range 26 East

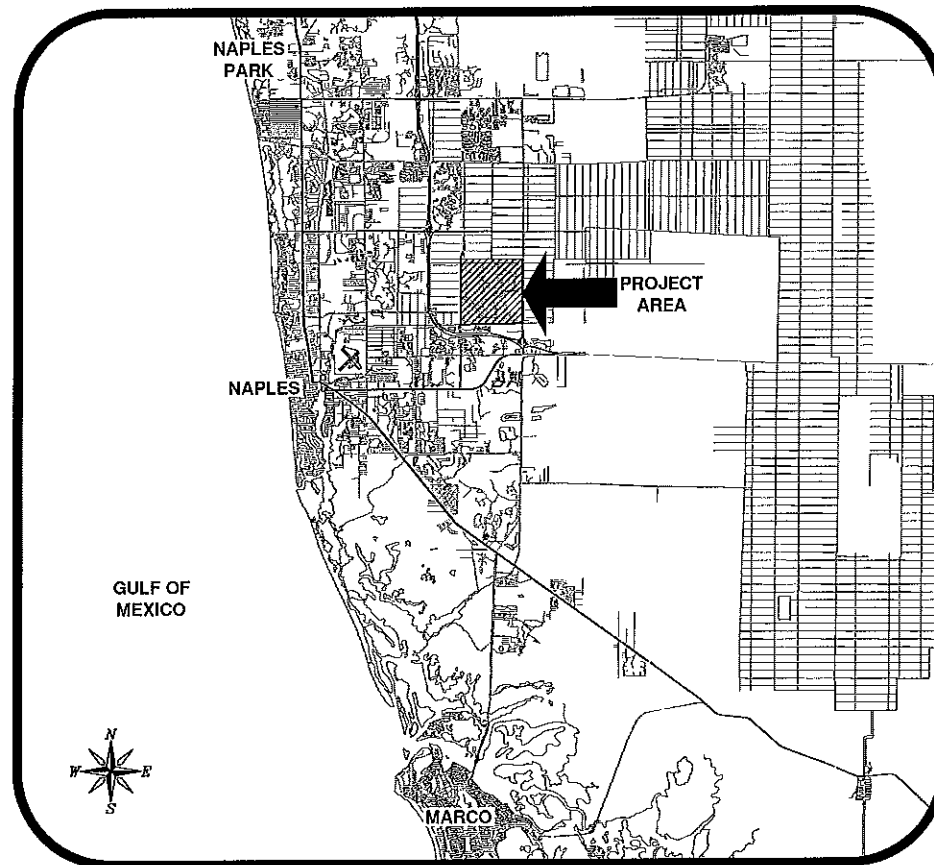
Owner/Developer:

**COLLIER COUNTY
ROADS, STORMWATER AND BRIDGE
SECTION TRANSPORTATION
ENGINEERING DEPARTMENT**

Joseph Delate
2885 South Horseshoe Drive
Naples, FL 34104
TEL: (239) 252-8192



Vicinity Map
N.T.S.



Location Map
N.T.S.

Prepared by:



Civil Engineers • Land Surveyors • Planners • Landscape Architects
Cert. of Auth. EB-0005151 Cert. of Auth. LB-0005151 Business LC 26000266
Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

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3800 Via Del Rey
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Revisions

Revision	Date	Description	By

DAVID W. SCHMITT, P.E.
O. GRADY MINOR & ASSOC., P.A.
3800 VIA DEL REY
BONITA SPRINGS, FL 34134
FLORIDA P.E. LICENSE NO. 41671
EB/LB 0005151

DATE: AUG 2013
FILE NAME: CCU146-COVER.DWG
JOB CODE: CCU146
DRAWING NUMBER 1 OF 33

SUBMITTAL

Golden Gate City Stormwater
In Conjunction with Sidewalk Improvements 20th Ct.SW, 46th Terr. SW, & 48th St. SW



GENERAL NOTES:

- 1) THIS SET OF PLANS HAS BEEN PREPARED IN GENERAL ACCORDANCE WITH THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM," 2013 BOOKLET
- 2) THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH THE FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", DATED 2013, AS REVISED TO DATE.
- 3) STANDARD CLEARING AND GRUBBING IS TO BE PERFORMED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ALL DISTURBED OR DAMAGED AREAS WITHIN AND OUTSIDE THE LIMITS OF CONSTRUCTION CAUSED BY HIS WORK.
- 4) DESIGN PROFESSIONAL'S P.S.M. SHALL BE RESPONSIBLE FOR INITIAL SURVEY CONTROL TO BE USED FOR CONSTRUCTION LAYOUT IN ACCORDANCE WITH CHAPTERS 177 & 472 FLORIDA STATUTES AND CHAPTER 61-6-17 OF THE FLORIDA ADMIN. CODE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT.
- 5) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A COLLIER COUNTY RIGHT-OF-WAY PERMIT. THE COUNTY HAS OBTAINED A PRE-APPROVAL OF THE PROPOSED PLANS. A COPY SHALL BE PROVIDED TO THE COUNTY.
- 6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN FDEP GENERIC STORMWATER NOI FOR THE PROJECT. A COPY SHALL BE PROVIDED TO THE COUNTY.
- 7) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY DEWATERING PERMITS REQUIRED FOR THE PROPOSED CONSTRUCTION. A COPY OF THE PERMIT, IF REQUIRED SHALL BE PROVIDED TO COUNTY.

CONSTRUCTION NOTES:

- 1) CURB CUT RAMPS OR SLOPED AREAS SHALL BE PROVIDED AT ALL ACCESS LOCATIONS (INTERSECTIONS TO STREETS, ROADS, OR HIGHWAYS). HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL CURBED LOCATIONS PER F.D.O.T. INDEX NO. 304. SIDEWALK RUNNING SLOPES MAY BE SET AT A RATIO OF 20:1 BUT IN NO CASE STEEPER THAN 12:1. SIDEWALK CROSS SLOPES ARE IN NO CASE TO EXCEED 50:1.
- 2) THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ENCROACHMENT ONTO PRIVATE PROPERTY A MINIMUM OF 14 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- 3) ANY PUBLIC LAND PROPERTY CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DISTURBED THE CONTRACTOR SHALL PROPERLY REFERENCE IT'S LOCATION TO BE RESET BY THE CONTRACTOR'S SURVEYOR. ANY SURVEY MONUMENTS AND PRIVATE PROPERTY CORNER DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN COST.
- 4) FILL SHALL BE PROVIDED AS NECESSARY TO TRANSITION UP TO DRIVEWAYS, ADJACENT TO EXISTING DRAINAGE FEATURES (CATCH BASINS, DITCHES) AND TO MATCH EXISTING LAWN GRADES. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK, THE COST IS INCIDENTAL TO THE DRAINAGE IMPROVEMENT CONSTRUCTION.
- 5) ACCESS ONTO EXISTING STREETS AND DRIVES SHALL BE MAINTAINED TO LOCAL TRAFFIC AND PROPERTY OWNERS, RESPECTIVELY. CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES ON PUBLIC OR PRIVATE ROADWAYS. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF ROADWAYS ON A DAILY BASIS WHEN ACTIVITIES ARE ON OR AFFECT A ROADWAY.
- 6) CONTRACTOR SHALL RELOCATE OR ADJUST UTILITY VALVES, IRRIGATION SYSTEMS, ELECTRICAL POLES AND FENCES IN CONFLICT WITH THE PROPOSED CULVERT REPLACEMENT. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK, THE COST IS INCIDENTAL TO THE DRAINAGE IMPROVEMENT CONSTRUCTION.

DRAINAGE NOTES:

- 1) EXISTING DRAINAGE STRUCTURES WITHIN THE CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED IN THESE PLANS OR AS DIRECTED BY THE ENGINEER.
- 2) EXISTING SWALES SHALL BE RE-GRADED AS NECESSARY TO MAINTAIN PROPER DRAINAGE. MAXIMUM FRONT SLOPE TO BE 3H:1V, UNLESS OTHERWISE SHOWN CULVERT BACK FILL IN THIS PLAN.
- 3) DRAINAGE SHALL GENERALLY CONFORM TO EXISTING GRADE AND SHALL NOT CAUSE RESTRICTIONS TO OVERLAND FLOW OF STORM WATER RUNOFF INTO EXISTING INLETS, SWALES OR OTHER DRAINAGE FEATURES.
- 4) PAVEMENT AROUND VALVES, MANHOLES AND METER BOXES SHALL BE FLUSH, WITH ACCESS TO ALL UTILITIES MAINTAINED AT ALL TIMES. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK, THE COST IS INCIDENTAL TO THE CONSTRUCTION.
- 5) THE CONTRACTOR IS RESPONSIBLE FOR PROPER SEDIMENT AND EROSION CONTROL. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK. THE COST IS INCIDENTAL TO THE CONSTRUCTION.
- 6) ALL EXISTING CULVERT PIPES SHALL BE INSPECTED BY CONTRACTOR, COUNTY AND DESIGN PROFESSIONAL. ALL CULVERT PIPE SHALL BE CLEANED AS NECESSARY AND DIRECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING EXISTING AND NEW CULVERT PIPE CLEAN OF ALL SILT UNTIL ACCEPTANCE OF THE PROJECT.

UTILITY COORDINATION NOTES:

- 1) EXISTING UTILITIES HAVE BEEN SHOWN ON PLANS FROM AVAILABLE RECORD DRAWINGS, FIELD VERIFICATION HAS BEEN LIMITED TO VISUAL FEATURES OBTAINED DURING SURVEY. THE EXACT LOCATION OF ALL UTILITIES WITHIN THE PROJECT LIMITS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION, AS NEEDED.
- 2) THE CONTRACTOR IS REQUIRED TO CONTACT ALL UTILITY OWNERS PRIOR TO THE BEGINNING OF CONSTRUCTION AND COORDINATE WITH UTILITY OWNERS DURING CONSTRUCTION, USING THE FOLLOWING CONTACT LIST:

UTILITY	OWNER	PHONE
ELECTRIC	FLORIDA POWER & LIGHT (24 HOUR EMERGENCY)	800-458-8243
TELEPHONE	CENTURY LINK (24 HOUR EMERGENCY)	611
CABLE TV	COMCAST	611
WASTEWATER	F.G.U.A.	866-866-4382
UNDERGROUND FACILITY LOCATION SERVICE: (THE SUNSHINE STATE)	SUNSHINE ONE CALL	800-432-4770
WATER	F.G.U.A.	800-432-4770

*DATUM IS NAVD 88 WITH A CONVERSION OF NAVD 88 + 1.266 = NGVD 29.

TRAFFIC CONTROL NOTES:

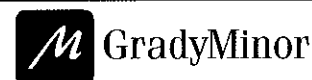
- 1) THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE 2009 EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD PART VI, TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION, AS REVISED TO DATE), FOR GENERAL TRAFFIC CONTROL ZONE REQUIREMENTS AND ADDITIONAL INFORMATION, REFER TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION BOOKLET "DESIGN STANDARDS" DATED JANUARY 2013 INDEX NOS. 600 THROUGH 670, AS APPLICABLE.
- 2) WHERE "FLAGGER" AND "WORKER" SIGNS ARE USED, THE SIGNS SHALL BE COVERED OR REMOVED DURING PERIODS WHEN CONSTRUCTION OPERATIONS ARE SUSPENDED SUCH AS NIGHTS, WEEKENDS OR HOLIDAYS.
- 3) PLACEMENT OF ALL CONSTRUCTION SIGNS SHALL BE FIELD LOCATED IN SUCH A WAY THAT WILL AVOID OBSTRUCTION OF OR CONFLICT WITH EXISTING SIGNS. EXISTING SIGNS NOT IN USE OR IN CONFLICT WITH LANE OR ROAD CLOSURE SHALL BE COVERED TEMPORARILY
- 4) LANE CLOSURES SHALL BE SCHEDULED AS FOLLOWS:
 - A. ONE TRAVEL LANE SHALL BE KEPT OPEN FOR EACH DIRECTION WITHIN THE WORK AREA THROUGHOUT THE DURATION OF CONSTRUCTION, EXCEPT WHEN A LANE CLOSURE IS PERMITTED.
 - B. THE LOCATION AND DURATION OF EACH LANE CLOSURE, INCLUDING TURN LANES, SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE IMPLEMENTATION OF THE CLOSURE.
 - C. NO WORK SHALL BE DONE REQUIRING A LANE CLOSURE BETWEEN THE FOLLOWING HOURS:
 - FROM 7:00 A.M. TO 9:00 A.M. AND 4:00 P.M. TO 6:00 P.M. ON MONDAY THROUGH FRIDAY
 - HOLIDAYS AND SPECIAL EVENT DAYS, AS PERMITTED BY THE ENGINEER
 - EMERGENCIES AS DEEMED NECESSARY BY COLLIER COUNTY EMERGENCY MANAGEMENT, LAW ENFORCEMENT AUTHORITIES OR THE ENGINEER.
5. THE MINIMUM WIDTH OF ANY TRAVEL LANE AT ANY TIME SHALL BE 10 FEET.
6. LEFT TURN LANES SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION WHERE A LEFT TURN IS EXISTING.
7. THE EXISTING SIDEWALK ON 50TH STREET SW, 19TH PLACE SW, AND 19TH COURT SW SHALL BE CLOSED DURING CONSTRUCTION IN THAT AREA. SIDEWALK CLOSED SIGNS SHALL BE POSTED AT BOTH ENDS.
8. THE CONTRACTOR SHALL PHASE HIS CONSTRUCTION OPERATIONS IN SUCH A WAY THAT WILL MAINTAIN EXISTING ACCESS TO ALL SIDE STREET AND DRIVEWAYS AT ALL TIMES. A FLAGGER SHALL BE USED AT TIMES WHEN 2 - WAY ACCESS (I.E., LANE CLOSURES) TO A SIDE STREET IS NOT PROVIDED. TO DIRECT VEHICLES ENTERING OR EXISTING THE SIDE STREET. ADDITIONAL FLAGGERS MAY BE NECESSARY WHEN WORK ZONE INCLUDES A SIDE STREET.
9. UTILITY RELOCATION WORK SHALL BE COORDINATED BY THE CONTRACTOR TO AVOID ANY CONFLICT WITH THE VARIOUS PHASES OF THE TRAFFIC CONTROL PLAN.

DRAINAGE WORK TO CONSIST OF FOLLOWING

LEGEND

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.



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Golden Gate City Stormwater

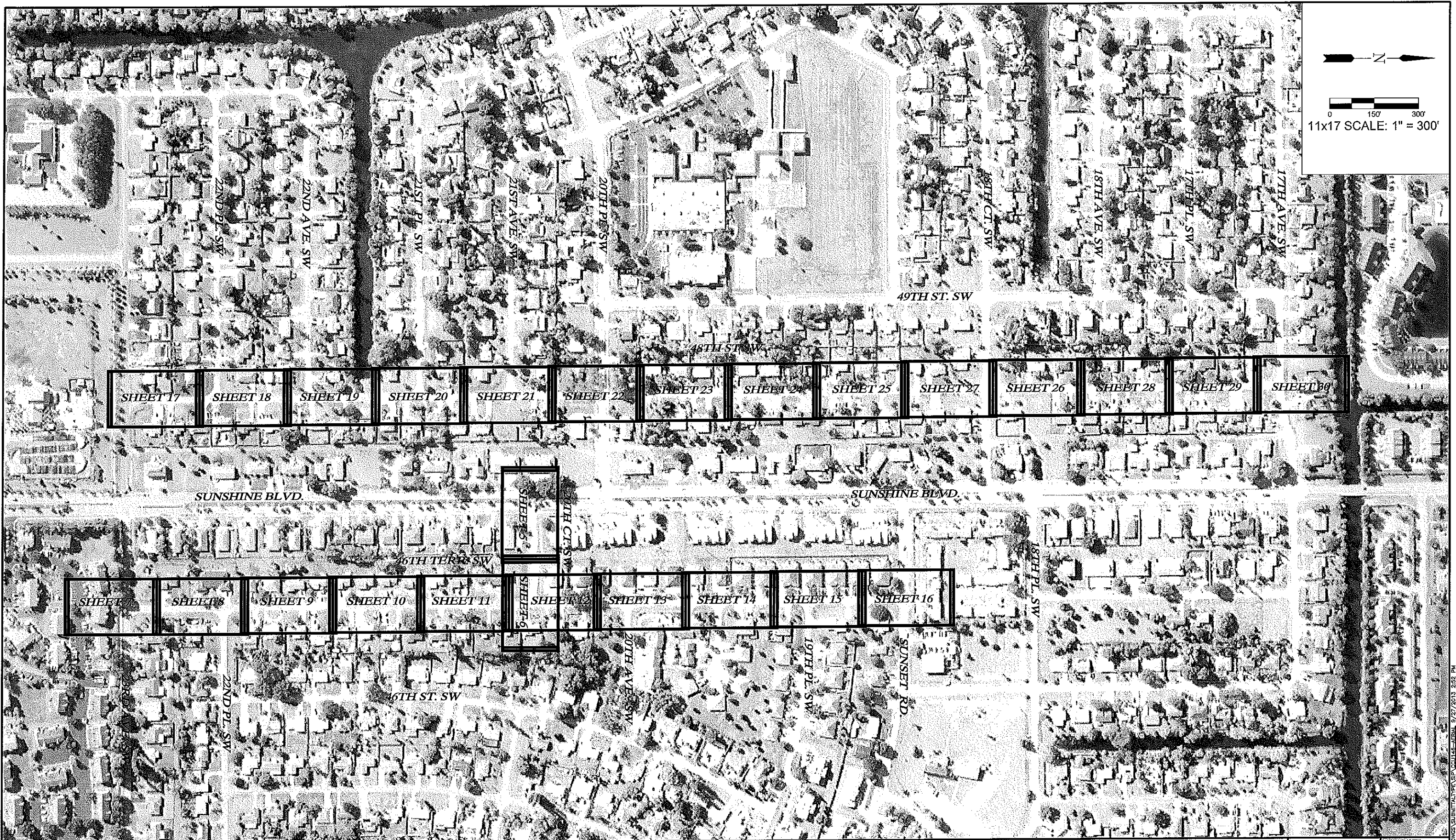
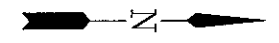
GENERAL NOTES

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

DAVID W. SCHMITT, P.E.
 FLORIDA P.E. LICENSE NO. 41671

MUNICIPALITY:	COLLIER
SRC./TWN./RGR:	21-22/49S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	

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LEGEND

Revision	Date	Description	By

DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. 1" = 300'
 HORIZ. 1" = 300'

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Golden Gate City Stormwater
 AERIAL - KEY SHEET
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER
 SEC./TWN/RGS: 21-22/49S/26E
 DATE: AUG 2013
 SUBMITTAL TYPE: _____
 DAVID W. SCHMITT, P.E.
 FLORIDA P.E. LICENSE NO. 41671
 SHEET 3 OF 33

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DRAINAGE STRUCTURE SCHEDULE

FROM	INVERT	GRATE ELEV.	TYPE	TO	SIZE (IN)	MATERIAL
CB - 1	6.00 E 5.70 S	8.00		CB - 2 CB - 3	14X23 12X18	ERCP ERCP
CB - 2	5.25 W	7.20	"C"	CB - 1	23	ERCP
CB - 3	5.70 N	7.70	"C"	CB - 1	14X 18	ERCP
CB - 4	0.00 N	0.00		CB - 5	12X 18	FRCP
CB - 5	-5.00 F	0.00		CB - 6 CB - 4	18	FRCP
CB - 6	-3.00 W	0.00		CB - 5	18	FRCP
CB - 7	-3.00 F	0.00		CB - 8	18	FRCP
CB - 8	-3.00 S	0.00		CB - 9 CB - 7	18	FRCP
CB - 9	-3.00 N	0.00		CB - 8	18	FRCP
CB - 10	4.90 E	7.70		CB - 11	18	FRCP
CB - 11	4.90 W	0.00		CB - 10	18	FRCP
CB - 20	-3.00 N	7.90		CB - 21	18	FRCP
CB - 21	-3.00 S	7.95		CB - 20 CB - 22	18	FRCP
CB - 22	-3.00 NW	0.00		CB - 21	18	FRCP
CB - 23	-0.50 N	0.00		CB - 24	18	FRCP
CB - 24	-5.00 S	0.00		CB - 23 CB - 25	18	FRCP
CB - 25	-3.00 S	8.00		CB - 24 CB - 26	18	FRCP
CB - 26	-3.00 N	0.00		CB - 27 CB - 25	18	FRCP
CB - 27	-3.00 S	8.35		CB - 26	18	FRCP
CB - 28	10.18 SF	9.60		CB - 29	18	FRCP
CB - 29	8.50 NW	9.00		CB - 28	18	FRCP
CB - 30	5.10 S 5.30 N 5.50 E	8.00		DBI-53 DBI-54 CB - 31	12 12 18	PVC PVC ERCP
CB - 31	5.50 W	0.00		CB - 30	18	FRCP
CB - 32	-5.00 F	7.50		CB - 33	18	FRCP
CB - 33	-3.00 W	0.00		CB - 32 CB - 34	18	FRCP
CB - 34	-3.00 S	0.00		CB - 33	18	FRCP

DRAINAGE STRUCTURE SCHEDULE

FROM	INVERT	GRATE ELEV.	TYPE	TO	SIZE (IN)	MATERIAL
DBI-1	4.90 E	7.90	"X"	DBI-2	12	PVC
DBI-2	4.90 W	7.90	"X"	DBI-1	12	PVC
DBI-3	4.05 E	7.05	"X"	DBI-4	12	PVC
DBI-4	4.05 W	7.05	"X"	DBI-3	12	PVC
DBI-5	4.90 N	7.90	"X"	DBI-6	12	PVC
DBI-6	4.90 S	7.90	"X"	DBI-5	12	PVC
DBI-7	6.00 N	9.00	"X"	DBI-8	12	PVC
DBI-8	6.00 S	9.00	"X"	DBI-7	12	PVC
DBI-9	6.00 N	9.00	"X"	DBI-10	12	PVC
DBI-10	6.00 S	9.00	"X"	DBI-9	12	PVC
DBI-11	6.00 N	9.00	"X"	DBI-12	12	PVC
DBI-12	6.00 S	9.00	"X"	DBI-11	12	PVC
DBI-13	6.00 N	9.00	"X"	DBI-14	12	PVC
DBI-14	6.00 S	9.00	"X"	DBI-13	12	PVC
DBI-15	6.00 N	9.00	"X"	DBI-16	12	PVC
DBI-16	6.00 S	9.00	"X"	DBI-15	12	PVC
DBI-17	5.60 N	8.60	"X"	DBI-18	12	PVC
DBI-18	5.60 S	8.60	"X"	DBI-17	12	PVC
DBI-19	5.60 N	8.60	"X"	DBI-20	12	PVC
DBI-20	5.60 S	8.60	"X"	DBI-19	12	PVC
DBI-21	5.60 N	8.60	"X"	DBI-22	12	PVC
DBI-22	5.60 S 5.60 N	8.60	"X"	DBI-21 DBI-23	12 12	PVC PVC
DBI-23	5.60 S	8.60	"X"	DBI-22	12	PVC
DBI-24	5.60 N	8.60	"X"	DBI-25	12	PVC
DBI-25	5.60 S	8.60	"X"	DBI-24	12	PVC
DBI-40	5.60 N	8.60	"X"	DBI-41	12	PVC
DBI-41	5.60 S	8.60	"X"	DBI-40	12	PVC
DBI-42	6.60 N	9.60	"X"	DBI-43	12	PVC
DBI-43	6.60 S	9.60	"X"	DBI-42	12	PVC
DBI-44	5.60 N	8.60	"X"	DBI-45	12	PVC
DBI-45	5.60 S	8.60	"X"	DBI-44	12	PVC
DBI-46	5.60 N	8.60	"X"	DBI-47	12	PVC
DBI-47	5.60 S	8.60	"X"	DBI-46	12	PVC

DRAINAGE STRUCTURE SCHEDULE

FROM	INVERT	GRATE ELEV.	TYPE	TO	SIZE (IN)	MATERIAL
DBI-48	5.20 N	8.20	"X"	DBI-49	12	PVC
DBI-49	5.20 S	8.20	"X"	DBI-48	12	PVC
DBI-50	5.15 N	8.15	"X"	DBI-51	12	PVC
DBI-51	5.15 S 5.15 N	8.15	"X"	DBI-50 DBI-52	12 12	PVC PVC
DBI-52	5.15 S	8.15	"X"	DBI-51	12	PVC
DBI-53	5.10 N	8.10	"X"	CB - 30	12	PVC
DBI-54	5.30 S	8.30	"X"	CB - 30	12	PVC
DBI-55	5.35 N	8.35	"X"	DBI-56	12	PVC
DBI-56	5.35 S	8.35	"X"	DBI-55	12	PVC
DBI-57	5.40 N	8.40	"X"	DBI-58	12	PVC
DBI-58	5.40 S 5.00 N	9.00	"X"	DBI-57 DBI-59	12 12	PVC PVC
DBI-59	5.00 S	9.00	"X"	DBI-58	12	PVC
DBI-60	6.50 N	9.50	"X"	DBI-61	12	PVC
DBI-61	6.50 S	9.50	"X"	DBI-60	12	PVC
DBI-62	6.40 N	9.40	"X"	DBI-63	12	PVC
DBI-63	6.40 S	9.40	"X"	DBI-62	12	PVC
DBI-64	6.40 N	9.20	"X"	DBI-65	12	PVC
DBI-65	6.40 S	9.20	"X"	DBI-64	12	PVC
DBI-66	6.00 N	9.00	"X"	DBI-67	12	PVC
DBI-67	6.00 S	9.00	"X"	DBI-66	12	PVC
DBI-68	5.50 N	8.50	"X"	DBI-69	12	PVC
DBI-69	5.50 S 5.40 N	8.50	"X"	DBI-68 DBI-70	12 12	PVC PVC
DBI-70	5.40 S	8.40	"X"	DBI-69	12	PVC
DBI-71	5.35 N	8.35	"X"	DBI-72	12	PVC
DBI-72	5.35 S	8.35	"X"	DBI-71	12	PVC
DBI-73	5.30 N	8.30	"X"	DBI-74	12	PVC
DBI-74	5.30 S	8.30	"X"	DBI-73	12	PVC

NOTE: ALL STRUCTURE TO BE PROVIDED WITH 12" SUMP.

LEGEND

- ESMT LANDSCAPE BUFFER
- ESMT FASSETMENT
- CB CATCH BASIN
- CS CONTROL STRUCTURE
- DBI DITCH BOTTOM INLET
- JB JUNCTION BOX
- MES MITERED END SECTION
- PE PIPE END W/ RIP RAP
- TI THREAT INLET
- TOR TOP OF BANK
- TOE OF SLOPE
- TOP EDGE OF WATER
- EDW BLOW-OFF VALVE
- BOV FLOW DIRECTION
- PROPOSED GRADE
- EXISTING GRADE

Revision	Date	Description	By

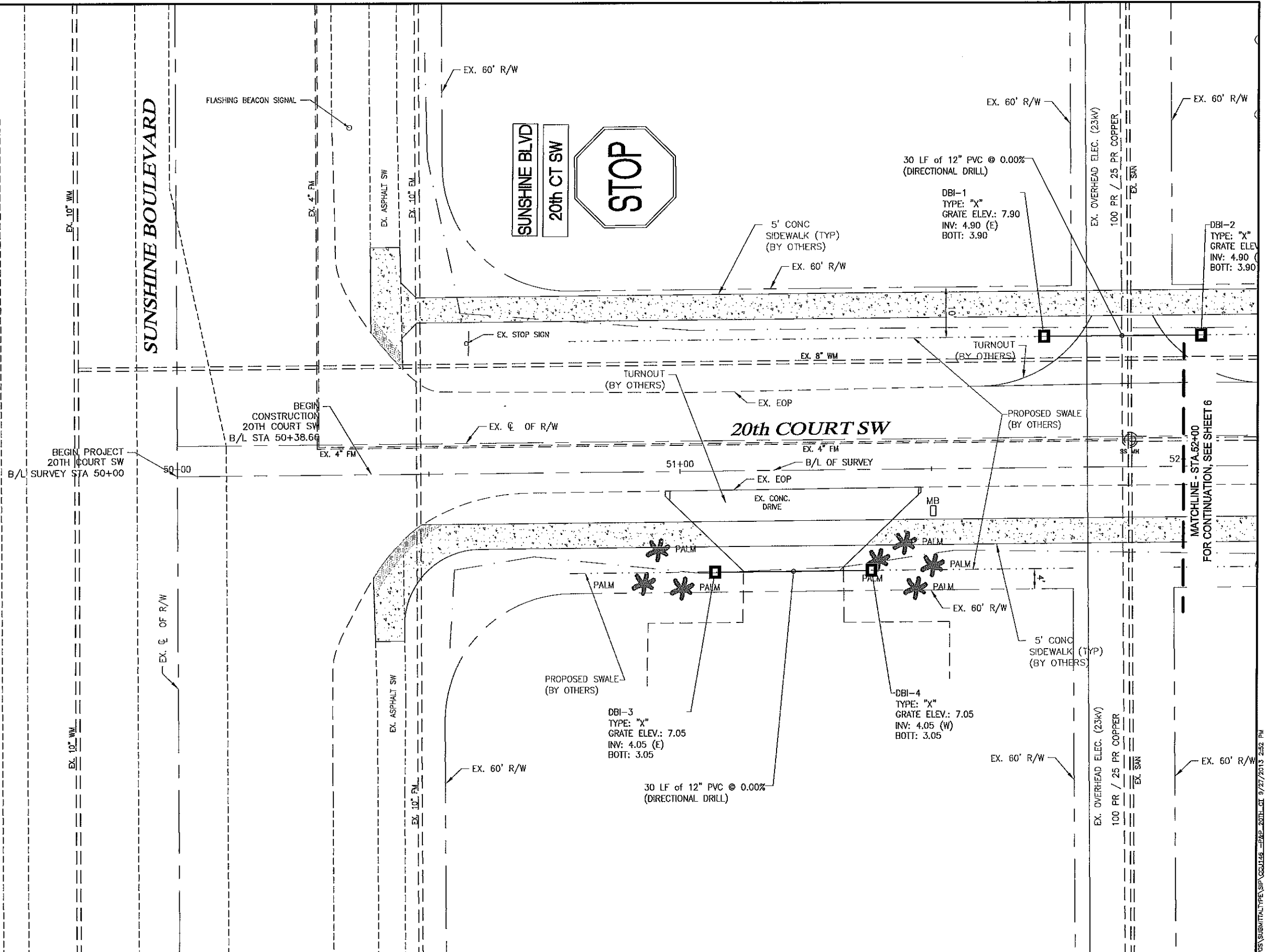
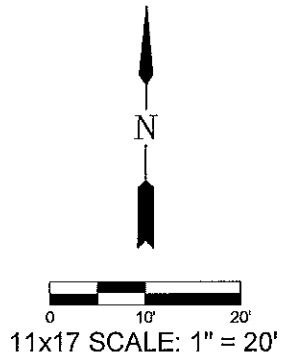
DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
 HORIZ.

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 Cert. of Auth. EB 0005151 Cert. of Auth. LB 0005151
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Golden Gate City Stormwater
 STRUCTURE TABLE SHEET
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER
 SEC/TWR/RGE: 21-22/49S/26E
 DATE: AUG 2013
 SUBMITTAL TYPE: _____
 SHEET 4 OF 33

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LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	PG	PROPOSED GRADE
JB	JUNCTION BOX	EG	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/ RIP RAP		
TI	THROAT INLET		
TB	TOP OF BANK		

Revision	Date	Description	By

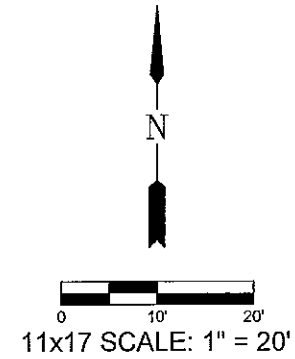
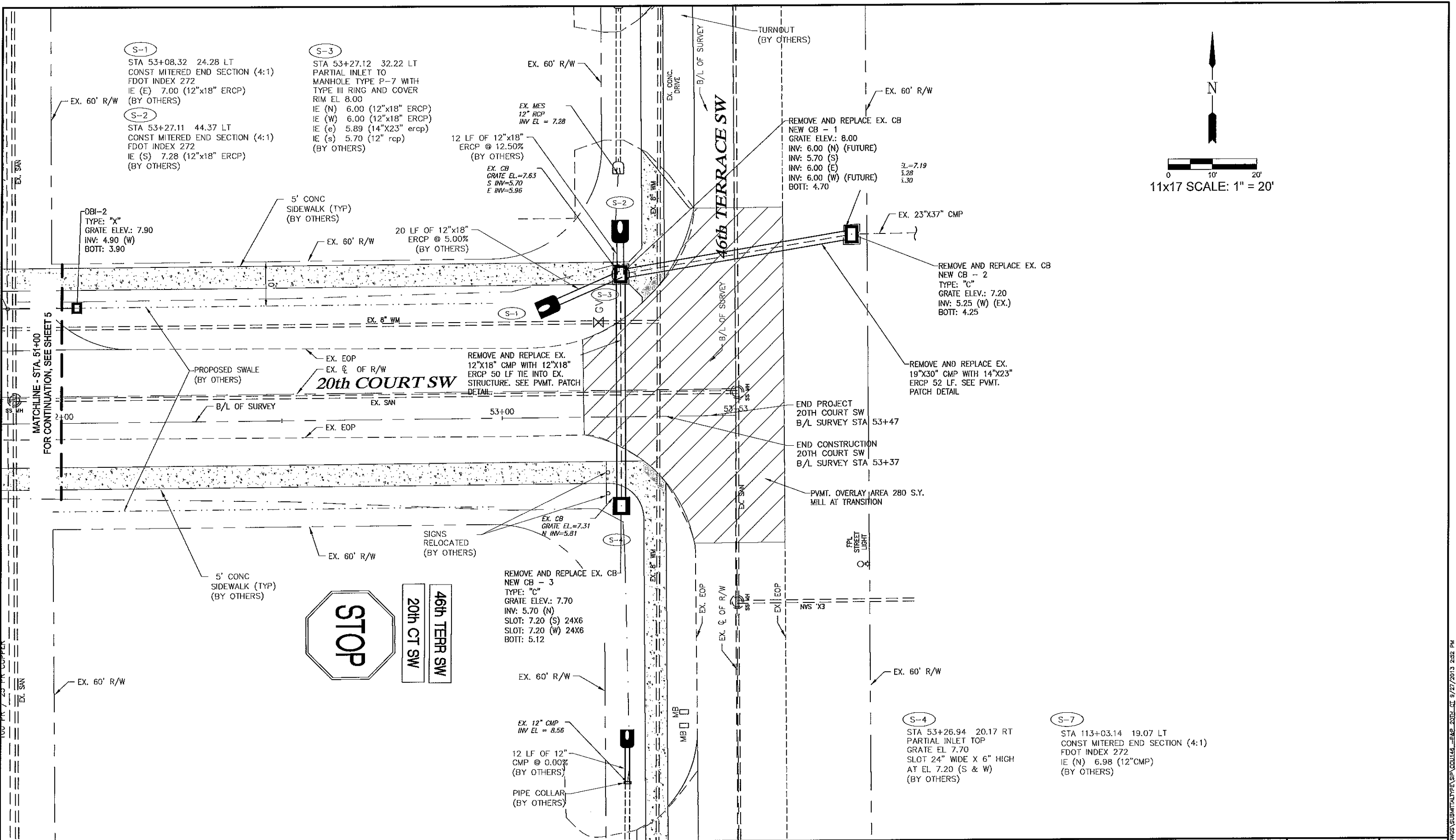
DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU148
 SCALE: VERT. AS NOTED
 HORIZ.

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Golden Gate City Stormwater
 20TH COURT S.W. (STA. 50+00-52+00)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER
 SEC/TWR/RGE: 21-22/46S/26E
 DATE: AUG 2013
 SUBMITTAL TYPE:
 SHEET 5 OF 33

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S-1
 STA 53+08.32 24.28 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (E) 7.00 (12"x18" ERCP)
 (BY OTHERS)

S-2
 STA 53+27.11 44.37 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (S) 7.28 (12"x18" ERCP)
 (BY OTHERS)

S-3
 STA 53+27.12 32.22 LT
 PARTIAL INLET TO
 MANHOLE TYPE P-7 WITH
 TYPE III RING AND COVER
 RIM EL 8.00
 IE (N) 6.00 (12"x18" ERCP)
 IE (W) 6.00 (12"x18" ERCP)
 IE (e) 5.89 (14"x23" ercp)
 IE (s) 5.70 (12" rcp)
 (BY OTHERS)

12 LF OF 12"x18"
 ERCP @ 12.50%
 (BY OTHERS)
 EX. CB
 GRATE EL.=7.63
 S INV=5.70
 E INV=5.96

REMOVE AND REPLACE EX. CB
 NEW CB - 1
 GRATE ELEV.: 8.00
 INV: 6.00 (N) (FUTURE)
 INV: 5.70 (S)
 INV: 6.00 (E)
 INV: 6.00 (W) (FUTURE)
 BOT: 4.70

REMOVE AND REPLACE EX. CB
 NEW CB - 2
 TYPE: "C"
 GRATE ELEV.: 7.20
 INV: 5.25 (W) (EX.)
 BOT: 4.25

REMOVE AND REPLACE EX.
 12"x18" CMP WITH 12"x18"
 ERCP 50 LF TIE INTO EX.
 STRUCTURE. SEE PVMT. PATCH
 DETAIL

END PROJECT
 20TH COURT SW
 B/L SURVEY STA 53+47

END CONSTRUCTION
 20TH COURT SW
 B/L SURVEY STA 53+37

PVMT. OVERLAY AREA 280 S.Y.
 MILL AT TRANSITION

REMOVE AND REPLACE EX. CB
 NEW CB - 3
 TYPE: "C"
 GRATE ELEV.: 7.70
 INV: 5.70 (N)
 SLOT: 7.20 (S) 24X6
 SLOT: 7.20 (W) 24X6
 BOT: 5.12

S-4
 STA 53+26.94 20.17 RT
 PARTIAL INLET TOP
 GRATE EL 7.70
 SLOT 24" WIDE X 6" HIGH
 AT EL 7.20 (S & W)
 (BY OTHERS)

S-7
 STA 113+03.14 19.07 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 6.98 (12"CMP)
 (BY OTHERS)

LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	→	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	(---)	PROPOSED GRADE
JB	JUNCTION BOX	(---)	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END / RIP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
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 Bonita Springs, Florida 34134

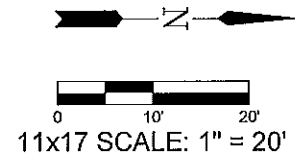
Golden Gate City Stormwater

20TH COURT S.W. (STA. 52+00-53+47)

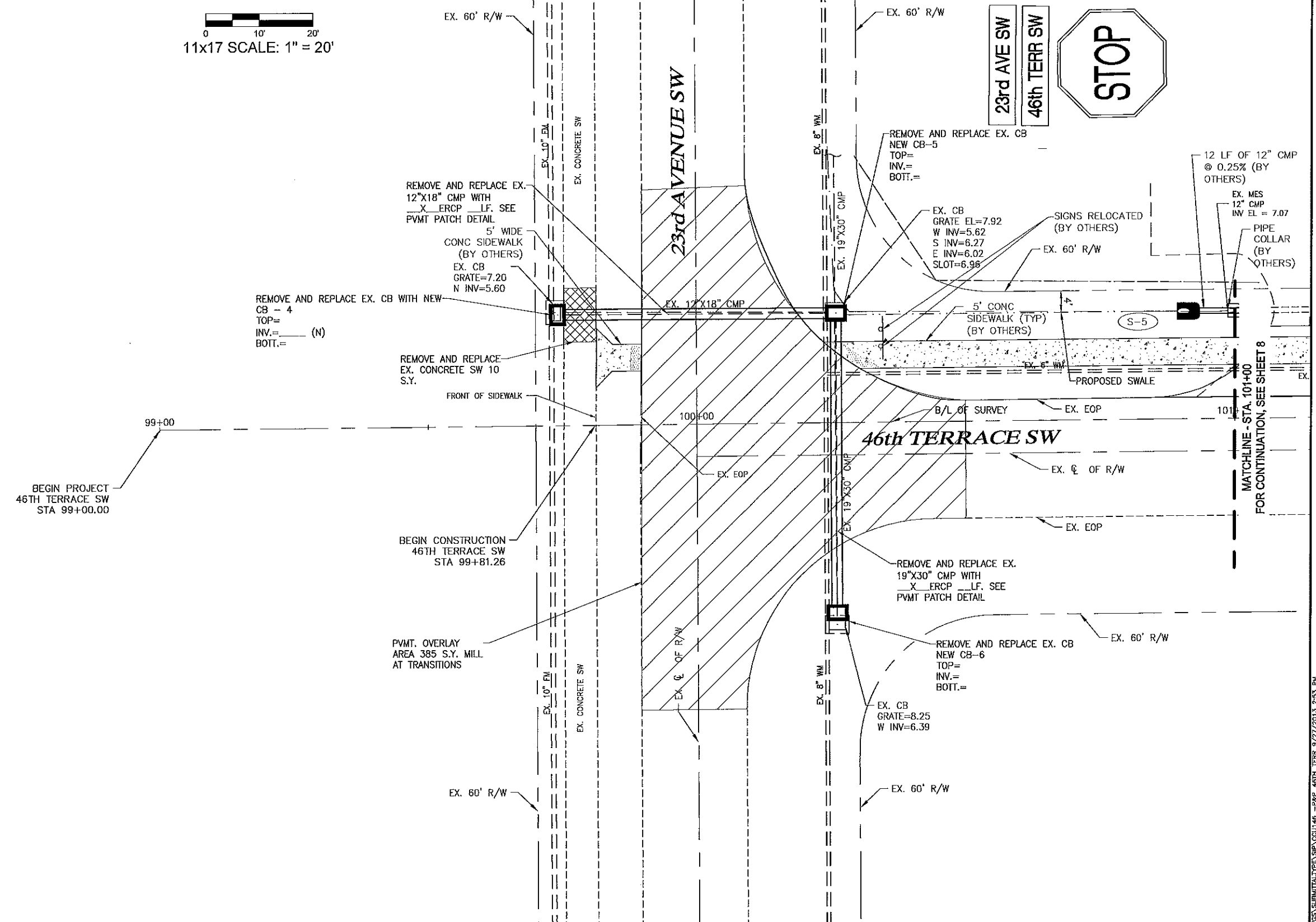
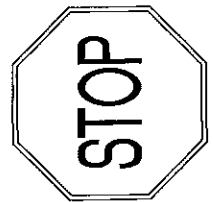
ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLER	DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671
SEC/TW/RGE: 21-22/49S/28E	
DATE: AUG 2013	
SUBMITTAL TYPE: ---	
SHEET 6 OF 33	

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S-5
 STA 100+89.55 20.00 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 7.04 (12" CMP)
 (BY OTHERS)



LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EDW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	MG	MITERED END SECTION
JB	JUNCTION BOX	PE	PIPE END w/ R/W RAP
MES	MITERED END SECTION	TI	THROAT INLET
PE	PIPE END w/ R/W RAP	TOB	TOP OF BANK
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

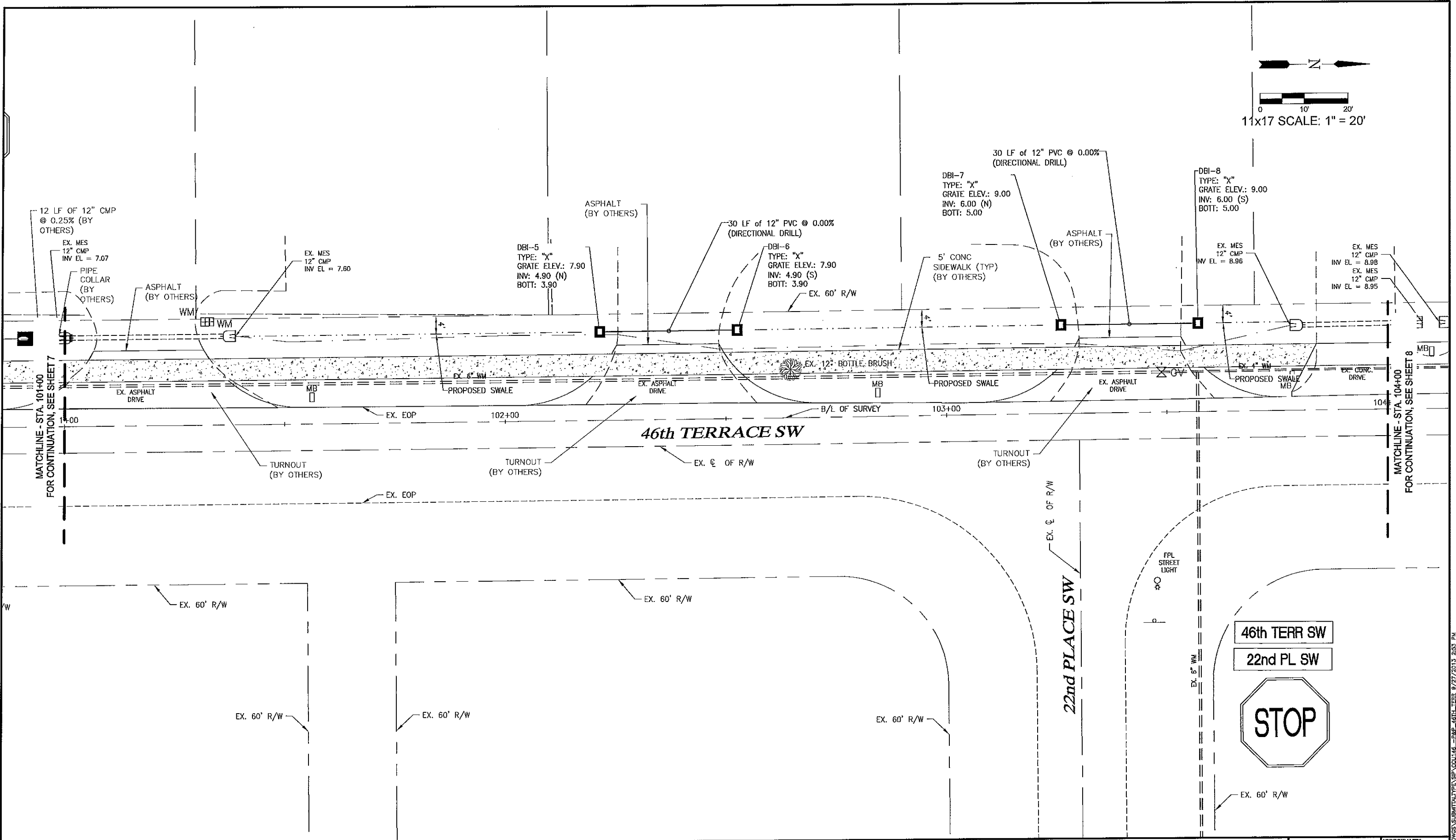
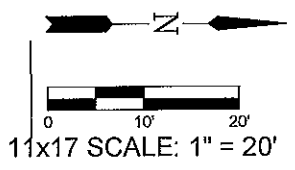
DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
 HORIZ.

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Golden Gate City Stormwater
 46TH TERRACE S.W. (STA. 99+00-101+00)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER	SEC./TWN/RGE: 21-22/49S/28E	DATE: AUG 2013	SUBMITTAL TYPE:
DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671	SHEET 7 OF 33		

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LEGEND

ESMT	LANDSCAPE BUFFER	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CS	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	→	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	—○—○—○	PROPOSED GRADE
JB	JUNCTION BOX	—	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/REP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

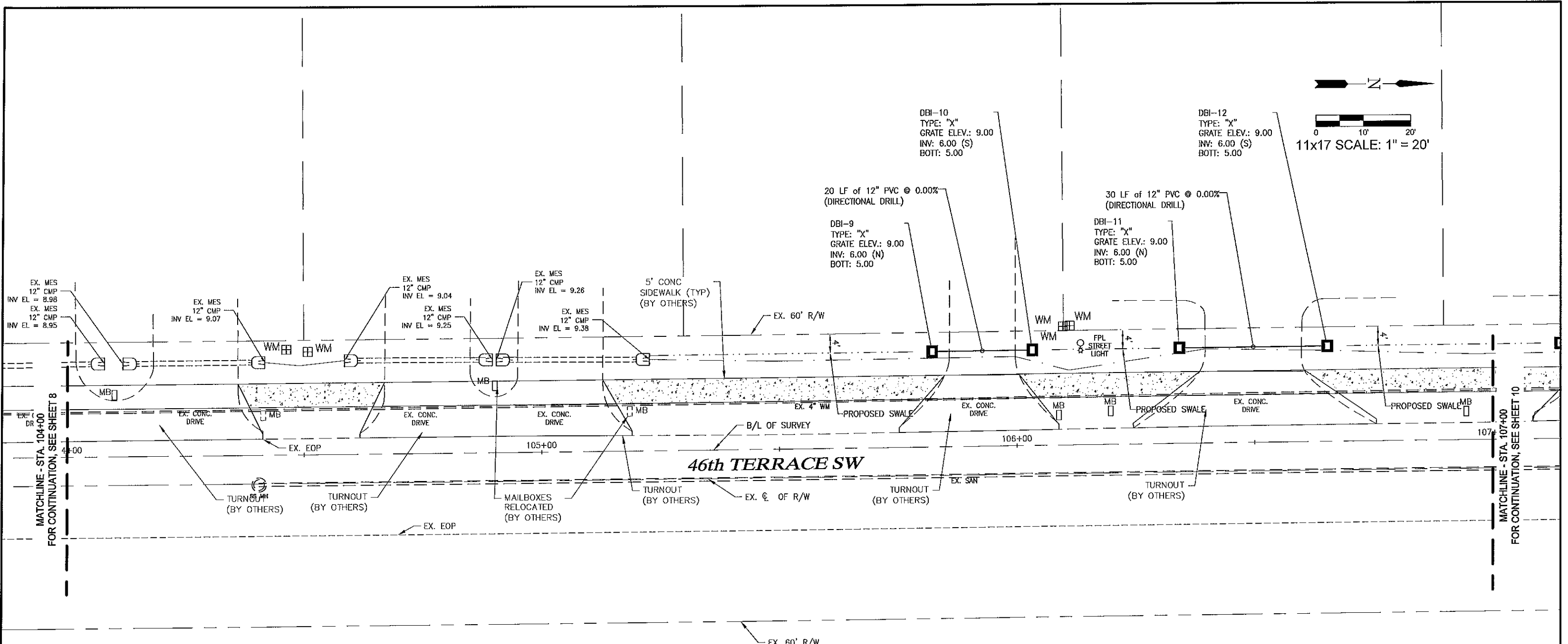
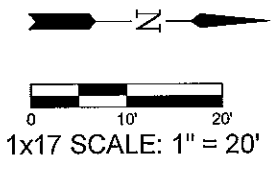
Revision	Date	Description	By

DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
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Golden Gate City Stormwater
 46TH TERRACE S.W. (STA. 101+00-104+00)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLER
 SEC/TWN/RGE: 21-22/49S/26E
 DATE: AUG 2013
 SUBMITTAL TYPE: ---
 DAVID W. SCHMITT, P.E.
 FLORIDA P.E. LICENSE NO. 41671
 SHEET 8 OF 33



MATCHLINE - STA. 104+00
FOR CONTINUATION, SEE SHEET 8

MATCHLINE - STA. 107+00
FOR CONTINUATION, SEE SHEET 10

46th TERRACE SW

LEGEND

ESMT	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	→	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	○	PROPOSED GRADE
JB	JUNCTION BOX	---	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/ R/W RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

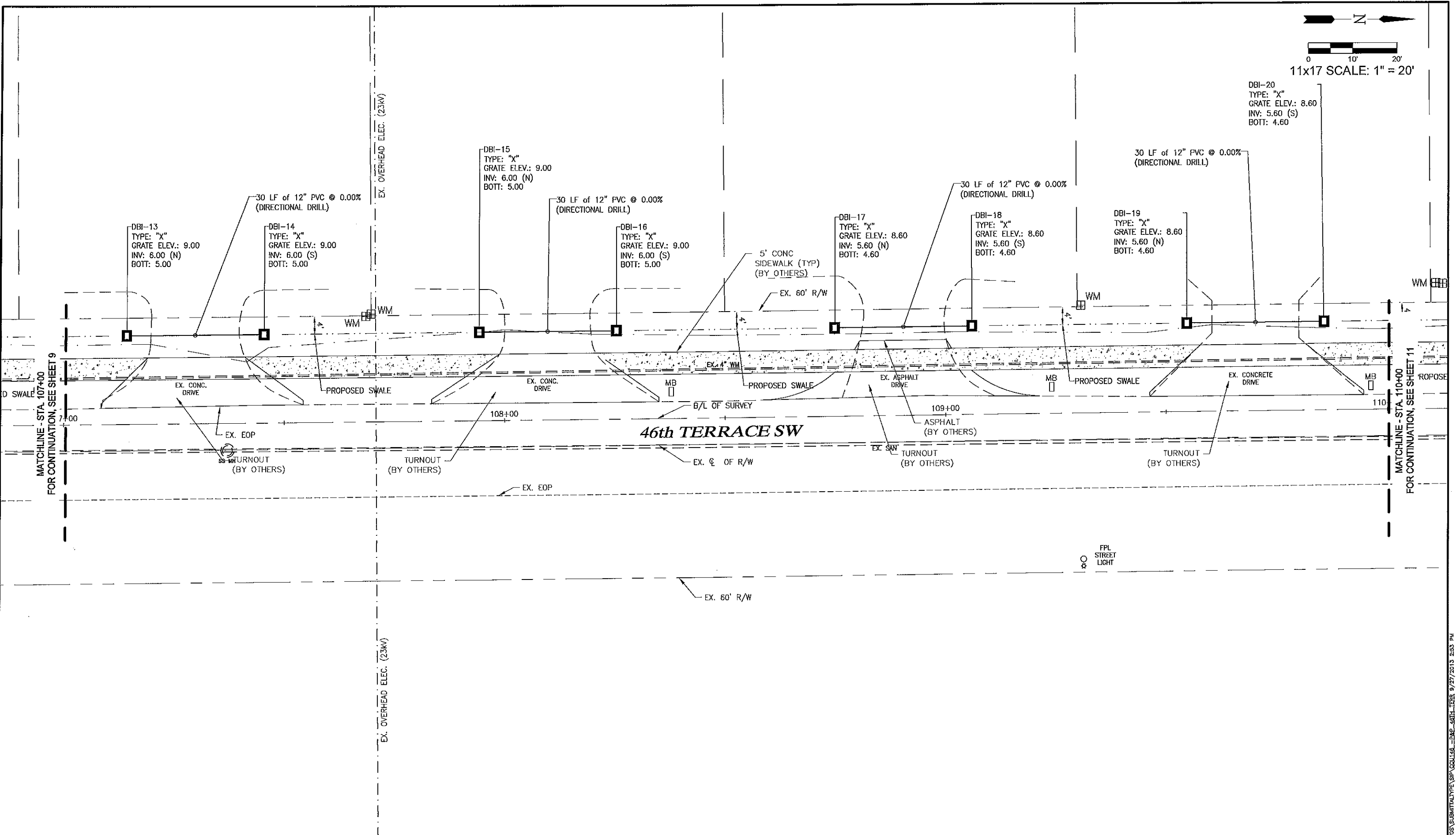
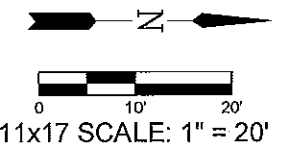
DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
 HORIZ.

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Golden Gate City Stormwater
 46TH TERRACE S.W. (STA. 104+00-107+00)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER	DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671
SEC./TWN./RGE: 21-22/49S/26E	
DATE: AUG 2013	SHEET 9 OF 33
SUBMITTAL TYPE: ---	

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LEGEND

ESMT	EASEMENT	TS	TOP OF SLOPE
CS	CATCH BASIN	EW	EDGE OF WATER
OB	CONTROL STRUCTURE	BOV	BLOW-OFF VALVE
OB	DITCH BOTTOM INLET	→	FLOW DIRECTION
JB	JUNCTION BOX	---	PROPOSED GRADE
MES	MITERED END SECTION	--- </td <td>EXISTING GRADE</td>	EXISTING GRADE
PC	PIPE END W/RIP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

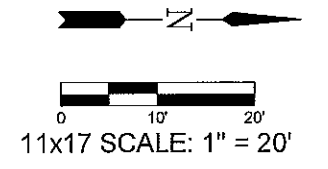
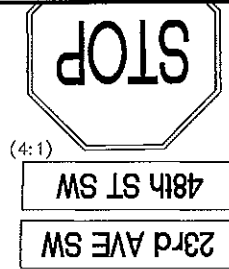
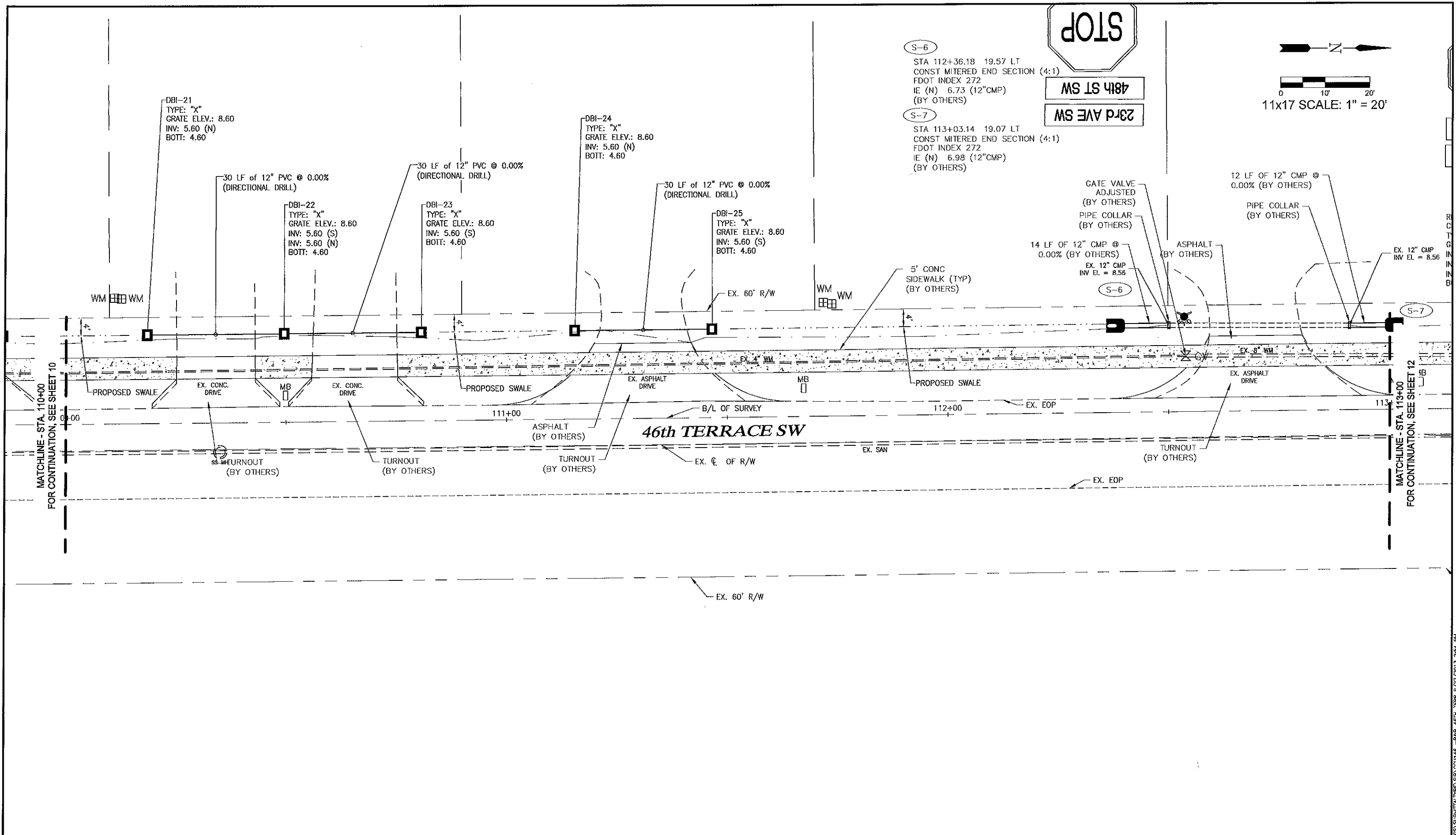
DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.

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Golden Gate City Stormwater
 46TH TERRACE S.W. (STA. 107+00-110+00)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER
SEC/TWN/RGR:	21-22/48S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	---
DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.
DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.

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S-6
 STA 112+36.18 19.57 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 6.73 (12\"/>

S-7
 STA 113+03.14 19.07 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 6.98 (12\"/>

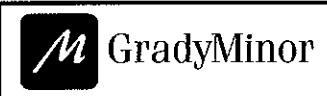
MATCHLINE - STA. 110+00
FOR CONTINUATION, SEE SHEET 10

MATCHLINE - STA. 113+00
FOR CONTINUATION, SEE SHEET 12

LEGEND	
LBE	LANDSCAPE BUFFER ESMT
ESMT	EASEMENT
CB	CATCH BASIN
CS	CONTROL STRUCTURE
DBI	DITCH BOTTOM INLET
JB	JUNCTION BOX
MES	MITERED END SECTION
PC	PIPE END W/ RIP RAP
TI	THROAT INLET
TOB	TOP OF BANK
TOS	TOE OF SLOPE
EW	EDGE OF WATER
BOV	BLOW-OFF VALVE
FD	FLOW DIRECTION
(---)	PROPOSED GRADE
(---)	EXISTING GRADE

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.



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 Business LC 26000266

Golden Gate City Stormwater

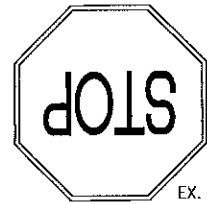
46TH TERRACE S.W. (STA. 110+00-113+00)

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
CONVERSION FACTOR TO NATIONAL GEODEIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

DAVID W. SCHMITT, P.E.
 FLORIDA P.E. LICENSE NO. 41671

MUNICIPALITY:
COLLIER
 SEC/TWN/RGB:
 21-22/49S/28E
 DATE:
 AUG 2013
 SUBMITAL TYPE:
 SHEET 11 OF 33

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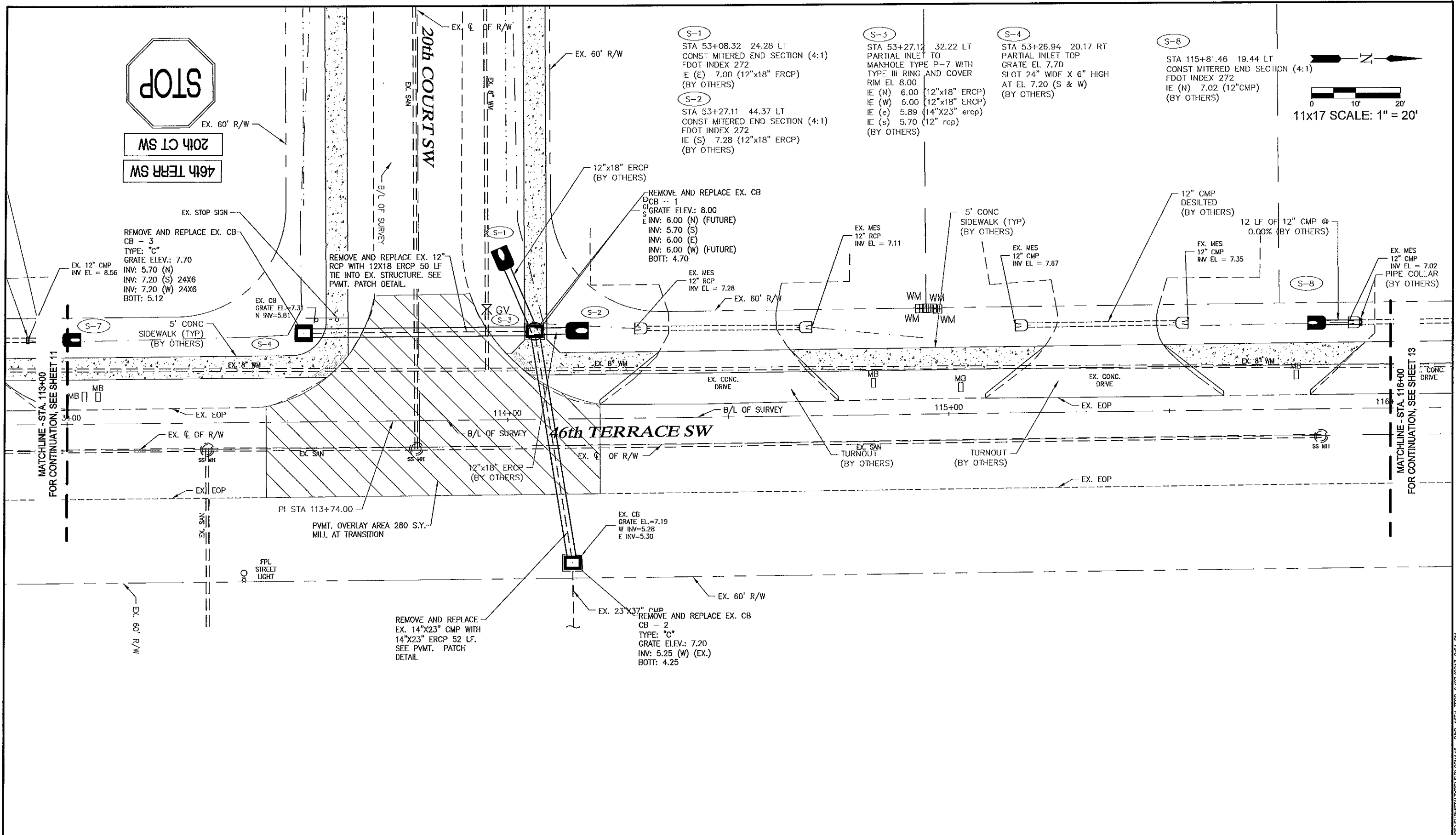
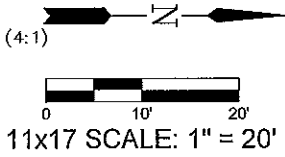
20th CT SW
46th TERR SW

S-1
STA 53+08.32 24.28 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (E) 7.00 (12"x18" ERCP)
(BY OTHERS)
S-2
STA 53+27.11 44.37 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (S) 7.28 (12"x18" ERCP)
(BY OTHERS)

S-3
STA 53+27.12 32.22 LT
PARTIAL INLET TO
MANHOLE TYPE P-7 WITH
TYPE III RING AND COVER
RIM EL 8.00
IE (N) 6.00 (12"x18" ERCP)
IE (W) 6.00 (12"x18" ERCP)
IE (e) 5.89 (14"x23" ercp)
IE (s) 5.70 (12" rcp)
(BY OTHERS)

S-4
STA 53+26.94 20.17 RT
PARTIAL INLET TOP
GRATE EL 7.70
SLOT 24" WIDE X 6" HIGH
AT EL 7.20 (S & W)
(BY OTHERS)

S-8
STA 115+81.46 19.44 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 7.02 (12"CMP)
(BY OTHERS)



LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	PG	PROPOSED GRADE
JB	JUNCTION BOX	EG	EXISTING GRADE
MES	MITERED END SECTION		
PC	PIPE END W/ TOP RCP		
TI	THRUST INLET		
TOR	TOP OF BANK		

Revision	Date	Description	By

DESIGNED BY: D.W.S.
DRAWN BY: M.E.S.
APPROVED: D.W.S.
JOB CODE: CCU146
SCALE: VERT. AS NOTED
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Golden Gate City Stormwater
46TH TERRACE S.W. (STA. 113+00-116+00)
ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER
SEC/TWN/RGE: 21-22/49S/26E
DATE: AUG 2013
SUBMITTAL TYPE: _____
DAVID W. SCHMITT, P.E.
FLORIDA P.E. LICENSE NO. 41671
SHEET 12 OF 33

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S-9

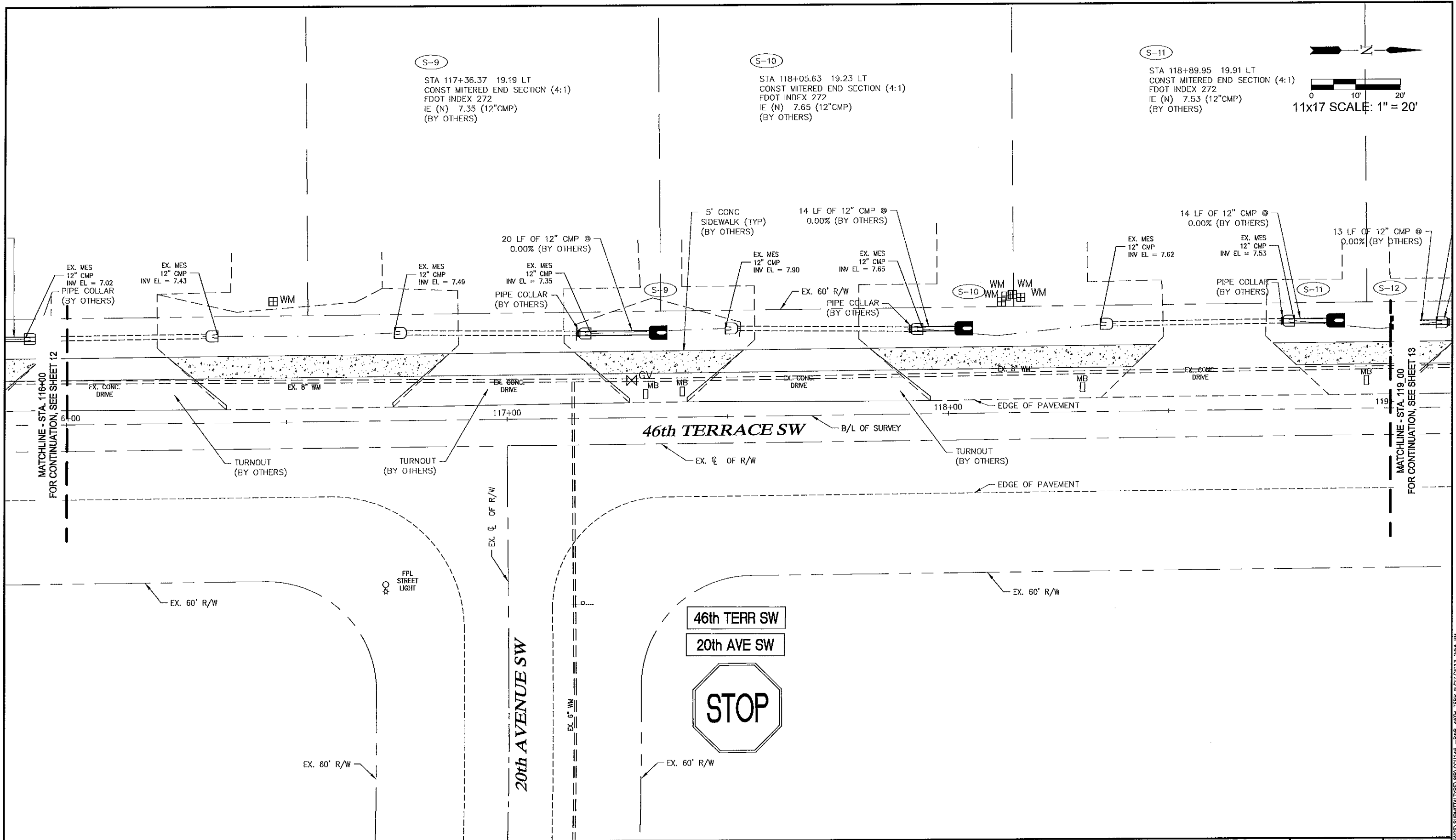
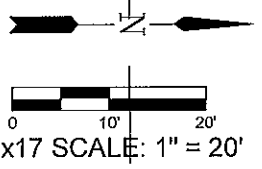
STA 117+36.37 19.19 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 7.35 (12" CMP)
(BY OTHERS)

S-10

STA 118+05.63 19.23 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 7.65 (12" CMP)
(BY OTHERS)

S-11

STA 118+89.95 19.91 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 7.53 (12" CMP)
(BY OTHERS)



LEGEND

ESMT	LANDSCAPE BUFFER	TOE OF SLOPE
ESMT	EASEMENT	EDGE OF WATER
CB	CATCH BASIN	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	PROPOSED GRADE
JB	JUNCTION BOX	EXISTING GRADE
MES	MITERED END SECTION	
PE	PIPE END w/ RIP RAP	
T	THROAT INLET	
TOD	TOP OF BANK	

Revision	Date	Description	By

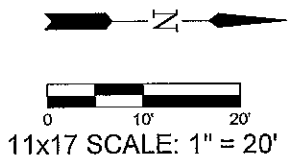
DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
 HORIZ.

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 3000 Via Del Rey
 Bonita Springs, Florida 34134
 Cert. of Auth. FB 0005151 Cert. of Auth. LB 0005151
 Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

Golden Gate City Stormwater
 46TH TERRACE S.W. (STA. 116+00-119+00)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '86)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER	SHEET 13 OF 33
SEC/TWN/RGE:	21-22/49S/28E	
DATE:	AUG 2013	
SUBMITTAL TYPE:		
DESIGNED BY:	DAVID W. SCHMITT, P.E.	FLORIDA P.E. LICENSE NO. 41671

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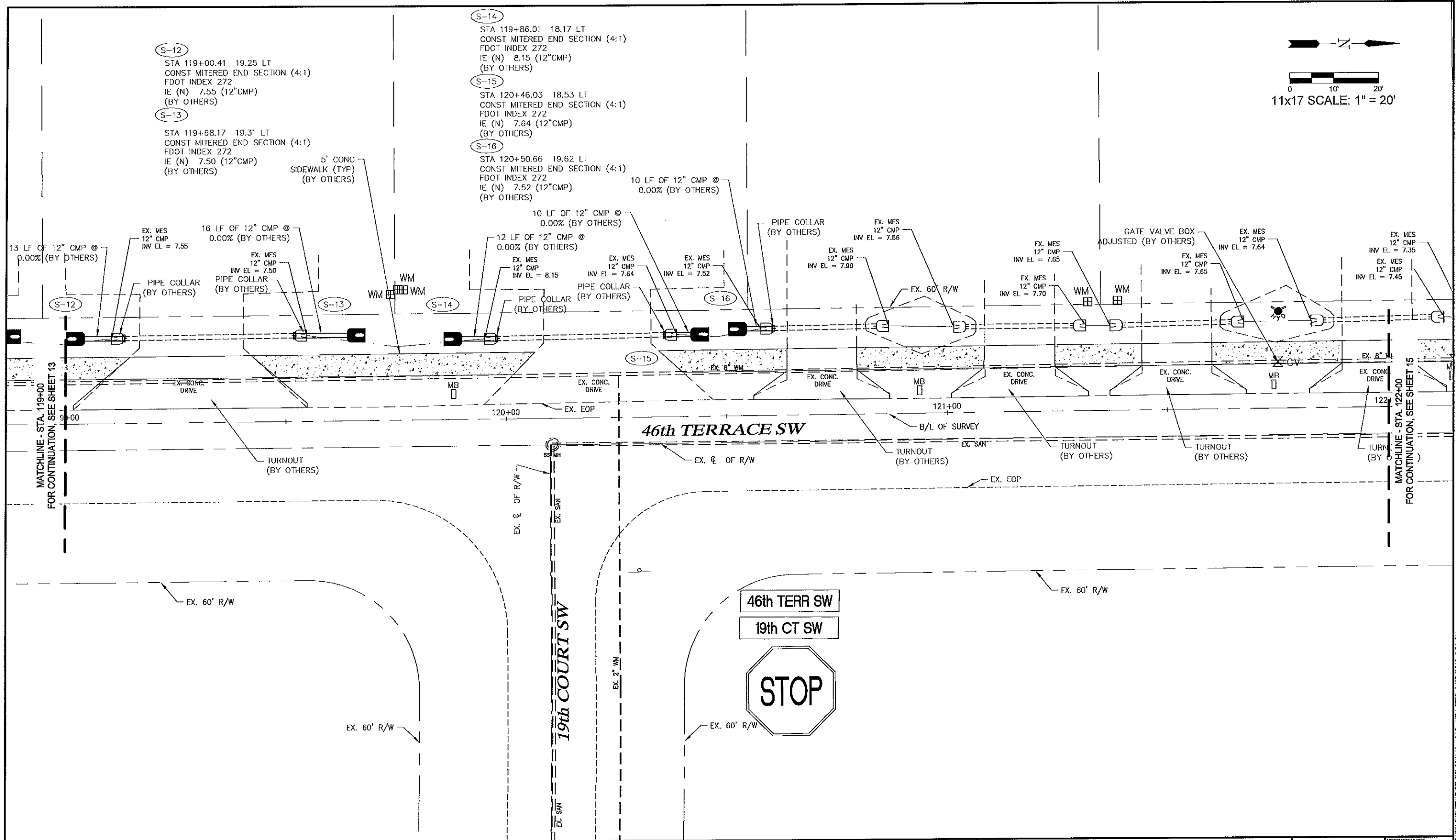
S-12
 STA 119+00.41 19.25 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 7.55 (12" CMP)
 (BY OTHERS)

S-13
 STA 119+68.17 19.31 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 7.50 (12" CMP)
 (BY OTHERS)

S-14
 STA 119+86.01 18.17 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 8.15 (12" CMP)
 (BY OTHERS)

S-15
 STA 120+46.03 18.53 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 7.64 (12" CMP)
 (BY OTHERS)

S-16
 STA 120+50.66 19.62 LT
 CONST MITERED END SECTION (4:1)
 FDOT INDEX 272
 IE (N) 7.52 (12" CMP)
 (BY OTHERS)



LEGEND

ESMT	LANDSCAPE BUFFER ESMT	TOE	TOE OF SLOPE
ESMT	EASMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	PG	PROPOSED GRADE
JB	JUNCTION BOX	EG	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END W/ RIP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description

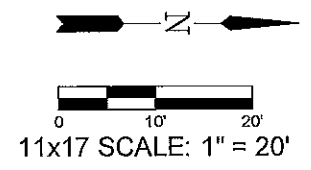
DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
 HORIZ.

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 Business LC 26000266
 Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

Golden Gate City Stormwater
 46TH TERRACE S.W. (STA. 119+00-122+00)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODESIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER	DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41871
SRC/TWN/RGE: 21-22/48S/26E	
DATE: AUG 2013	
SUBMITTAL TYPE: 	
SHEET 14 OF 33	

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S-17

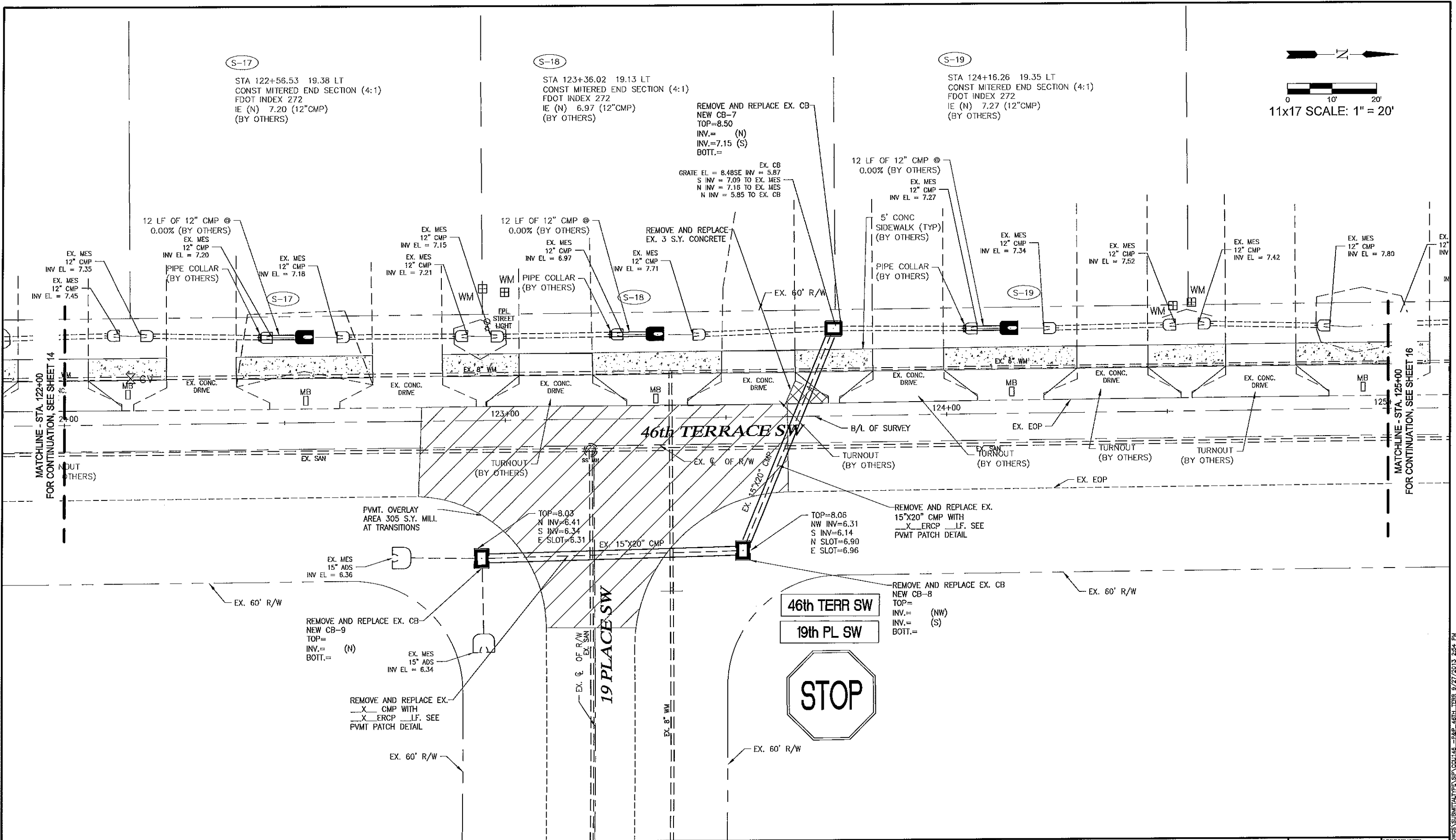
STA 122+56.53 19.38 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 7.20 (12" CMP)
(BY OTHERS)

S-18

STA 123+36.02 19.13 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 6.97 (12" CMP)
(BY OTHERS)

S-19

STA 124+16.26 19.35 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 7.27 (12" CMP)
(BY OTHERS)



MATCHLINE - STA. 122+00
FOR CONTINUATION, SEE SHEET 14

MATCHLINE - STA. 125+00
FOR CONTINUATION, SEE SHEET 16

LEGEND

ESMT	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EDW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	(---)	PROPOSED GRADE
JB	JUNCTION BOX	(---)	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/RIP RAP		
TI	THREAT INLET		
TB	TOP OF BANK		

Revision	Date	Description	By

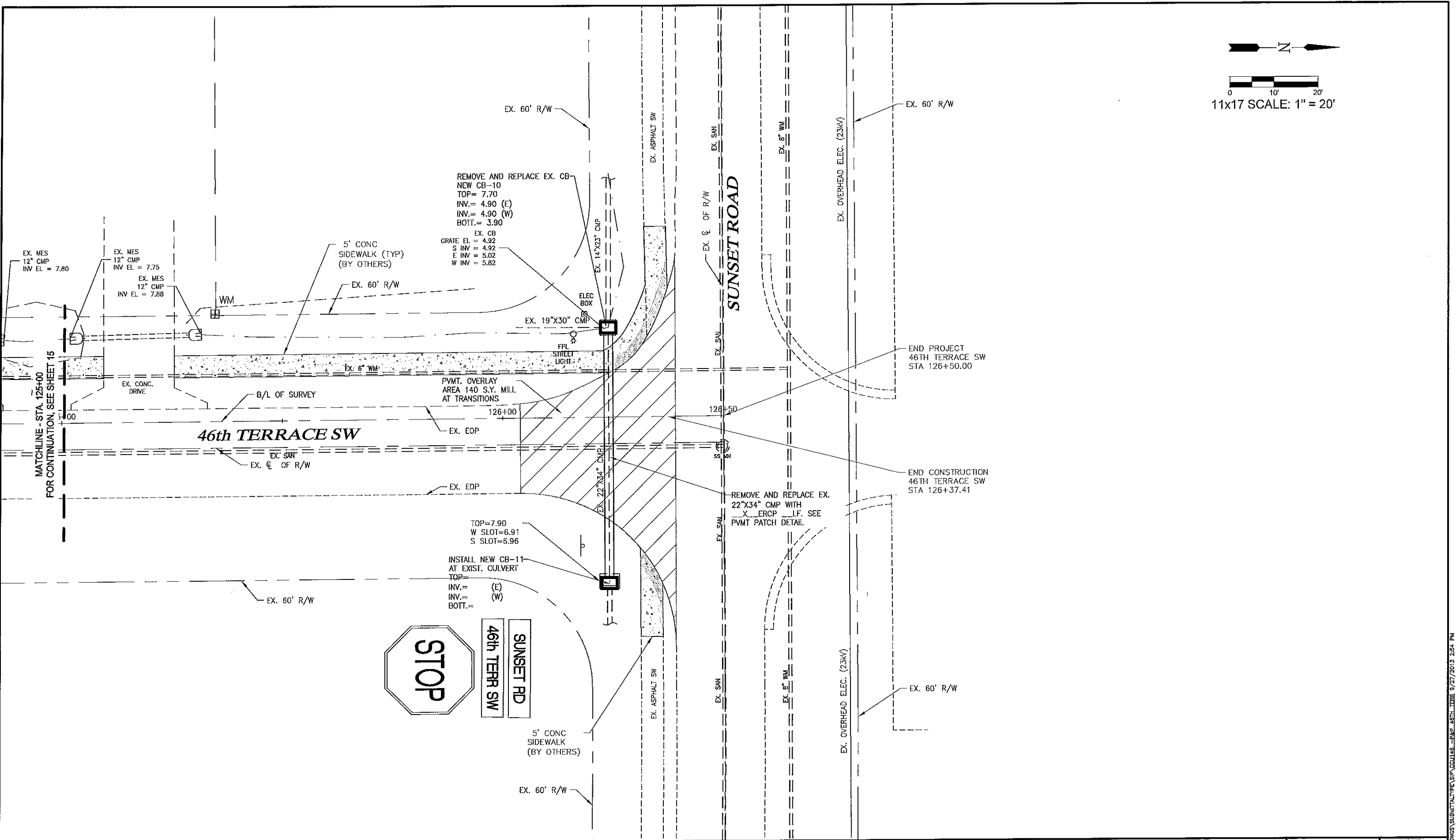
DESIGNED BY: D.W.S.
DRAWN BY: M.E.S.
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JOB CODE: CCU146
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Golden Gate City Stormwater
46TH TERRACE S.W. (STA. 122+00-125+00)
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MUNICIPALITY: COLUER	DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671
SEC./TWN/RGE: 21-22/49S/26E	
DATE: AUG 2013	
SUBMITTAL TYPE: 	
SHEET 15 OF 33	

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LEGEND

ESMT	LANDSCAPE BUFFER	ESMT	TOE OF SLOPE
ESMT	EASEMENT	ESMT	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	---	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	---	PROPOSED GRADE
JB	JUNCTION BOX	---	EXISTING GRADE
MES	MITERED END SECTION		
FE	PIPE END W/ RIP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
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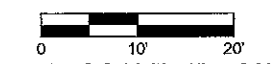
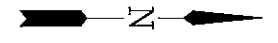
Golden Gate City Stormwater

46TH TERRACE S.W. (STA. 125+00-126+50)

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER
SEC./TWN/RGE:	21-22/49S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	
DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671	SHEET 16 OF 33

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11x17 SCALE: 1" = 20'

EX. 60' R/W

5' CONC
SIDEWALK (TYP)
(BY OTHERS)

S-20

33 LF OF 12"x18" ERCP
@ 3.03% (BY OTHERS)

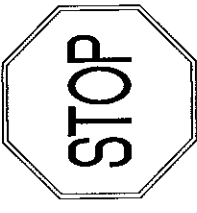
S-21

REMOVE AND REPLACE EX. CB
NEW CB-20
TOP=7.90
INV.= (N)
INV.= (W) (FUTURE) BLOCK 14

-1+00

23rd AVENUE SW

23rd AVE SW
48th ST SW



REMOVE AND REPLACE EX.
32"x44" WITH X
ERCP. LF SEE PVMT
PATCH DETAIL

EX. CB
GRATE=7.93
N INV=2.52
S INV=2.89
E SLOT=6.95

REMOVE AND REPLACE EX. CB
NEW CB-21
TOP=7.95
INV.= (S)
INV.= (E)
BOTT.=

6' WIRE FENCE

EX. GATE

5' CONC
SIDEWALK (TYP)
(BY OTHERS)

6' WHITE PLASTIC FENCE

FPL
STREET
LIGHT

EX. STOP SIGN

EX. TOS

EX. 60' R/W

50 PR COPPER

50 PR COPPER

48th STREET SW

REMOVE AND REPLACE EX.
X WITH X ERCP.
LF SEE PVMT PATCH
DETAIL

EX. CB
GRATE=7.82
SLOT=6.82
UNABLE TO ACCESS

PVMT OVERLAY AREA
395 S.Y. MILL AT
TRANSITIONS

EX. ϕ OF R/W

EX. EOP

2+00

B/L OF SURVEY

EX. EOP

EX. 60' R/W

REMOVE AND REPLACE EX. CB
NEW CB-22
TOP=7.95
INV.= (W)
INV.= (E)

EX. 60' R/W

BEGIN PROJECT
48TH STREET SW
B/L SURVEY STA

BEGIN CONSTRUCTION
48TH STREET SW
B/L SURVEY STA -0+37

EX. EOP

EX. ϕ OF R/W

EX. ϕ OF R/W

EX. 8' WM

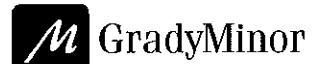
EX. 60' R/W

LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EDW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	PG	PROPOSED GRADE
JB	JUNCTION BOX	EG	EXISTING GRADE
WES	WATERED END SECTION		
PE	PIPE END W/RIP RAP		
T	THROAT INLET		
TOR	TOP OF BANK		

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.



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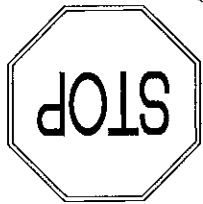
Golden Gate City Stormwater

48TH STREET S.W. (STA. -1+00-2+50)

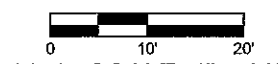
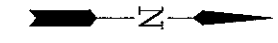
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MUNICIPALITY:	COLLIER
SEC/TWN/RGE:	21-22/49S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	
SHEET 17 OF 33	

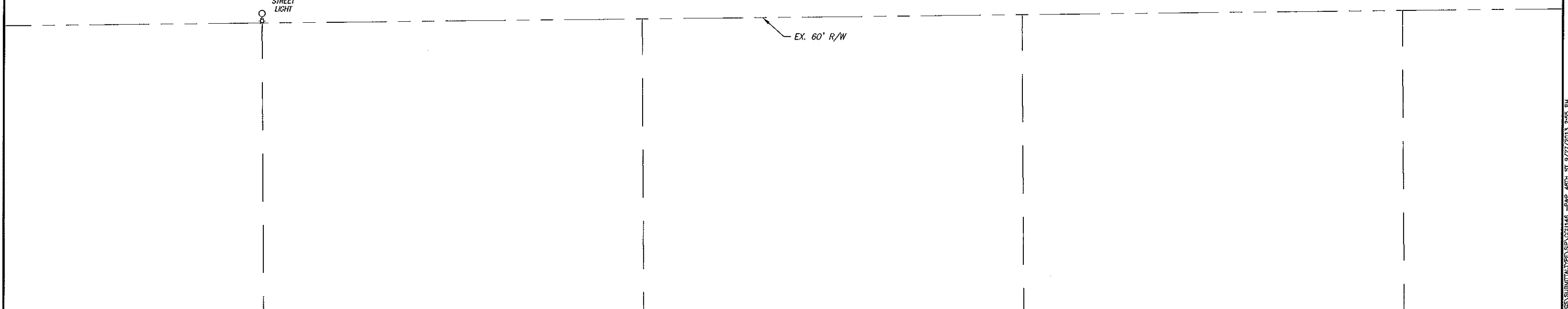
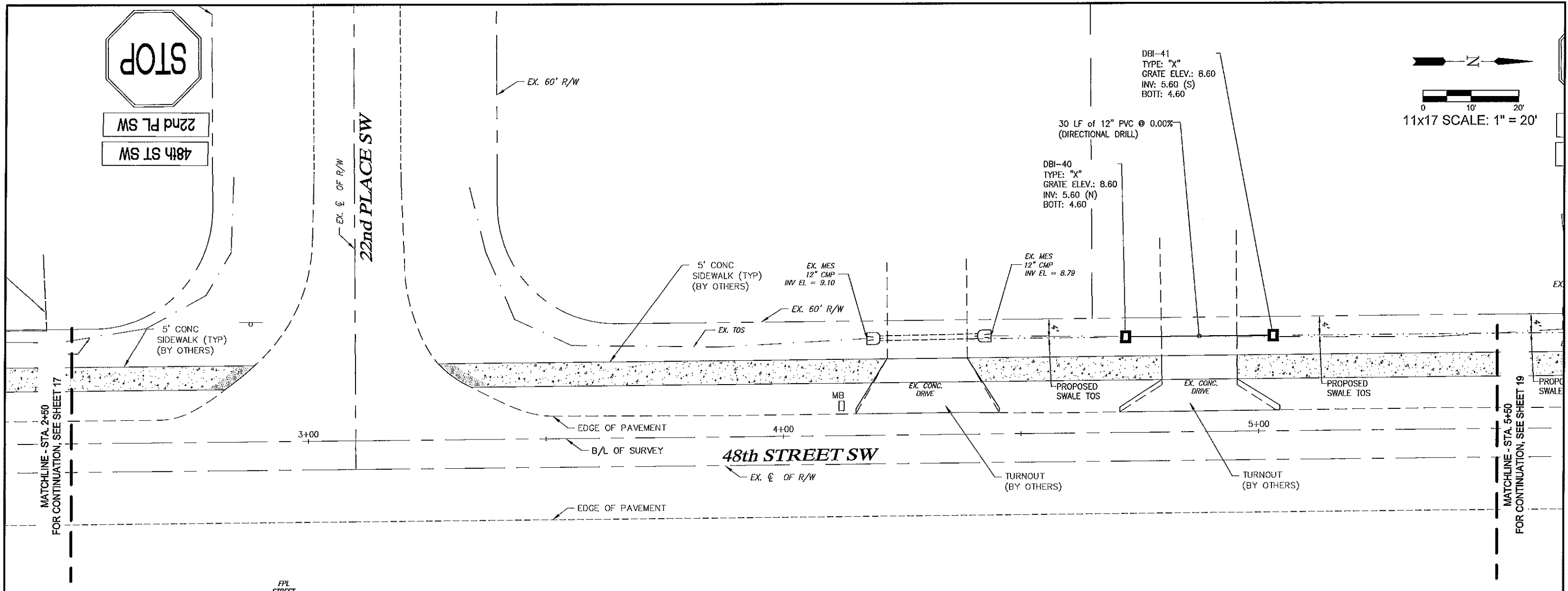
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MS
22nd PL SW
48th ST SW



11x17 SCALE: 1" = 20'



LEGEND

TOS	TOE OF SLOPE
ESMT	EDGE OF WATER
CB	BLOW-OFF VALVE
CS	CATCH BASIN
DBI	CONTROL STRUCTURE
DB	DITCH BOTTOM INLET
JB	JUNCTION BOX
MES	MITERED END SECTION
PE	PIPE END w/ RIP RAP
TI	THRUST INLET
TOB	TOP OF BANK
- - -	EXISTING GRADE
(---)	PROPOSED GRADE
→	FLOW DIRECTION

Revision	Date	Description

DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
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 HORIZ.

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Golden Gate City Stormwater
 48TH STREET S.W. (STA. 2+50-5+50)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLER
SEC/TWN/RGE:	21--22/49S/28E
DATE:	AUG 2013
SUBMITTAL TYPE:	---
BY:	DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671
SHEET:	18 OF 33

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22nd AVE SW

48th ST SW



EX. CB
GRATE EL = 9.37
SLOT EL = 8.00
INV. INACCESSIBLE
EX. 12" NORFOLK PINE

CENTERLINE OF R/W
22nd AVENUE SW

EX. 6" TREES

EX. 12" CABBAGE PALMS

EX. CB
GRATE EL = 7.99
W INV = 1.89
S INV = 1.95
E INV = 4.27
N INV = 2.62

ABOVE GROUND VEGETATION TO BE CLEARED (BY OTHERS)

REMOVE AND REPLACE EX. CB
NEW CB-25
TOP = 8.00
INV. = (S)
INV. = (N)
INV. = (W)

REMOVE AND REPLACE EX. CB
X CMP WITH
X RCP INV. = WITH
RIP-RAP UNDER AND 3'-0" EACH SIDE.

REMOVE AND REPLACE EX. X CMP WITH X ERCP LF.

EX. CB
GRATE EL = 7.98
INVERTS INACCESSIBLE

EX. 60' R/W
5' CONC SIDEWALK (TYP) (BY OTHERS)
EX. 10S

EX. 45"x29"

EX. 24" CMP
EX. 70S

5' CONC SIDEWALK (TYP) (BY OTHERS)

EX. VEGETATION AREA

MATCHLINE - STA. 5+50 FOR CONTINUATION, SEE SHEET 18

MATCHLINE - STA. 8+50 FOR CONTINUATION, SEE SHEET 20

48th STREET SW

REMOVE AND REPLACE EX. CB
NEW CB-23
TOP =
INV. = (N)
SLOT = (S)
SLOT = (N)

PVMT. OVERLAY AREA 120 S.Y. MILL AT TRANSITIONS

REMOVE AND REPLACE EX. X CMP WITH X ERCP LF. SEE PVMT PATCH DETAIL.

INSTALL NEW CB-24
TOP =
INV. = (N)
INV. = (S)
SLOT = (S)
SLOT = (N)

EX. CB
GRATE EL = 8.67
W SLOT = 7.67

REMOVE AND REPLACE EX. X CMP WITH X ERCP LF.

LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	(---)	PROPOSED GRADE
JB	JUNCTION BOX	(---)	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/RIP RAP		
TI	THROAT INLET		
TOT	TOP OF BANK		

Revision	Date	Description

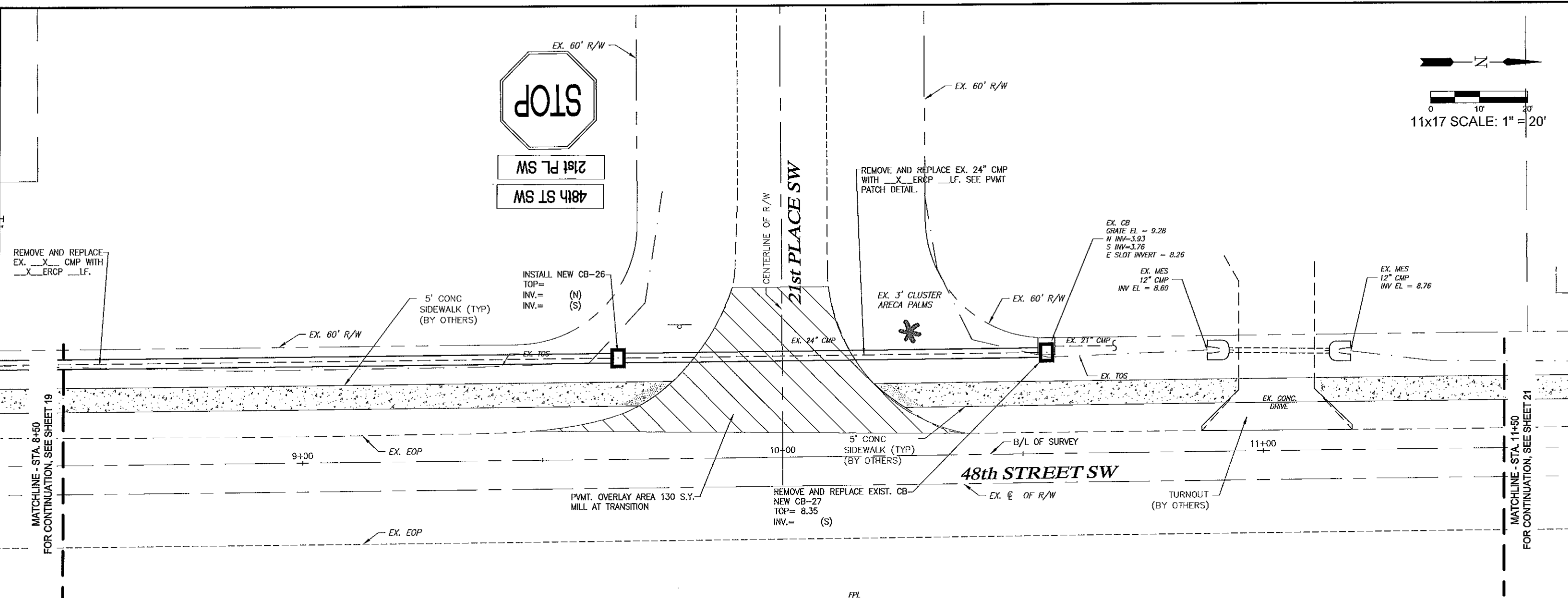
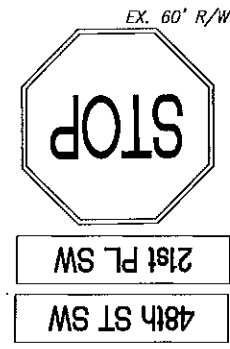
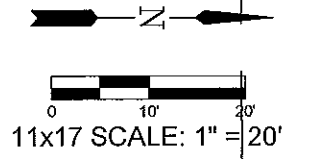
DESIGNED BY:	D.W.S.
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Golden Gate City Stormwater
 48TH STREET S.W. (STA. 5+50+00-8+50)
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MUNICIPALITY:	COLLIER
SEC./TWN./RGR:	21-22/49S/26E
DATE:	AUG 2013
SUBMITTAL TYPK:	
DRAWN BY:	DAVO W. SCHMITT, P.E.
SCALE:	FLORIDA P.E. LICENSE NO. 41671
SHEET:	SHEET 19 OF 33

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MATCHLINE - STA. 8+50
FOR CONTINUATION, SEE SHEET 19

MATCHLINE - STA. 11+50
FOR CONTINUATION, SEE SHEET 21

LEGEND

ESMT	LANDSCAPE BUFFER	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	CG	PROPOSED GRADE
JB	JUNCTION BOX	EG	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/ RIP RAP		
TI	THROAT INLET		
TOR	TOP OF BANK		

Revision	Date	Description

DESIGNED BY:	D.W.S.
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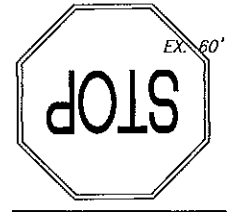
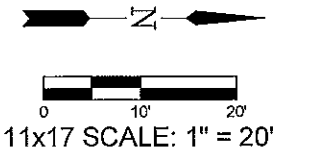
Golden Gate City Stormwater

48TH STREET S.W. (STA. 8+50+00-11+50)

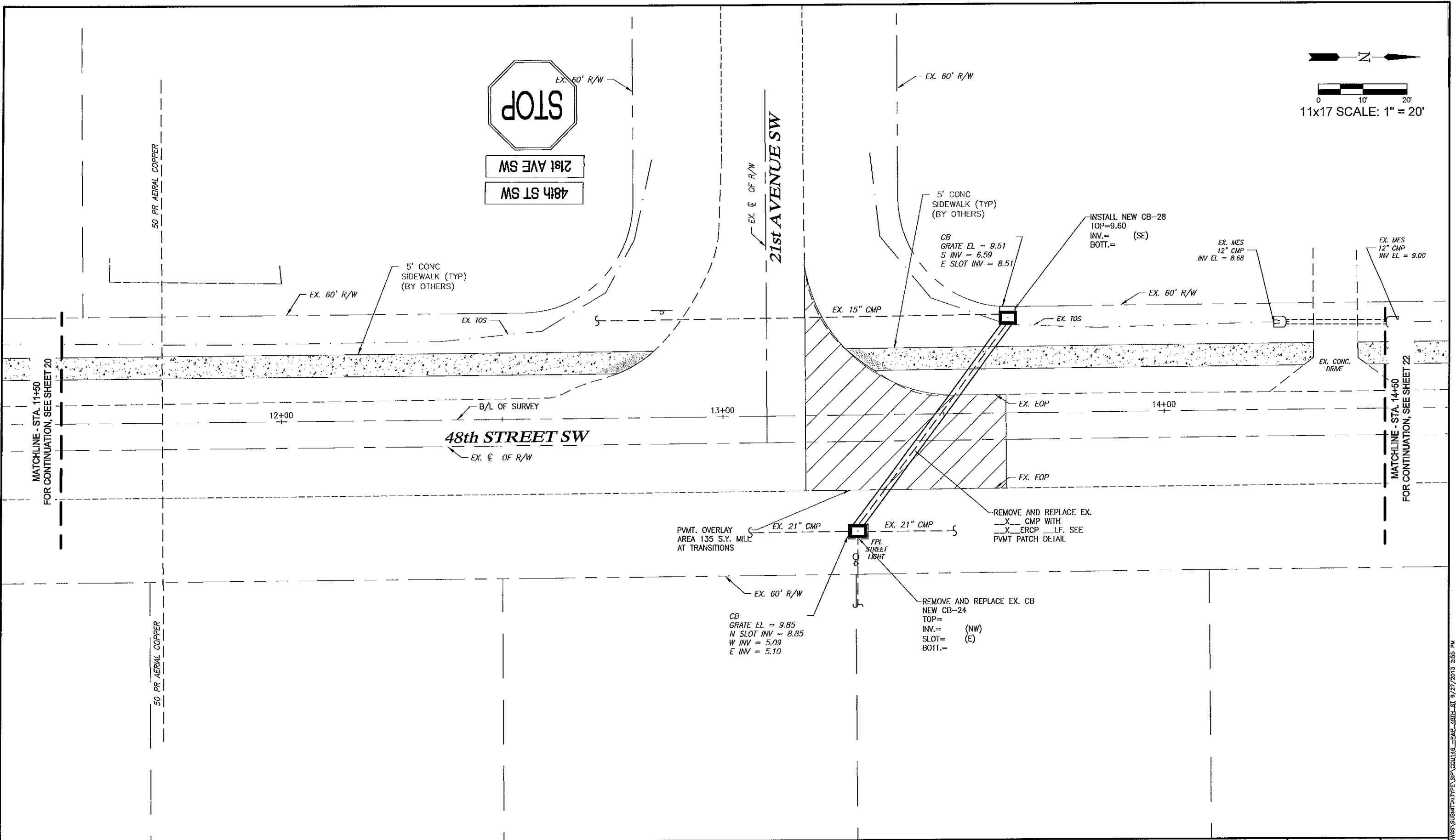
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SUBMITTAL TYPE:	

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21st AVE SW
48th ST SW



MATCHLINE - STA. 11+50
FOR CONTINUATION, SEE SHEET 20

MATCHLINE - STA. 14+50
FOR CONTINUATION, SEE SHEET 22

LEGEND

TOS	TOE OF SLOPE
ESMT	EASEMENT
CB	CATCH BASIN
CS	CONTROL STRUCTURE
DBI	DITCH BOTTOM INLET
JB	JUNCTION BOX
MES	MITERED END SECTION
PE	PIPE END w/ RIP RAP
TI	THRUST INLET
TDB	TOP OF BANK

Revision	Date	Description	By

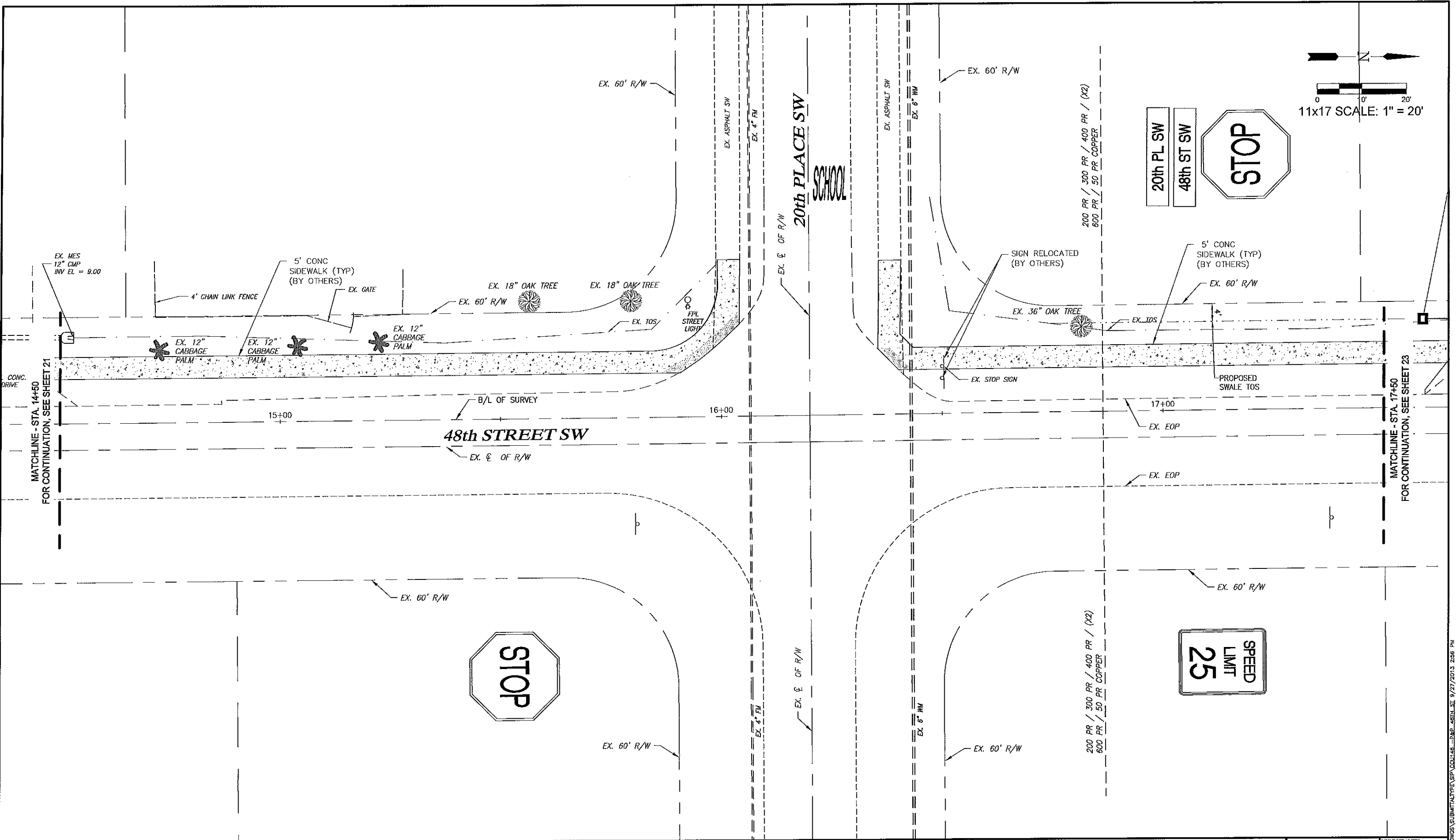
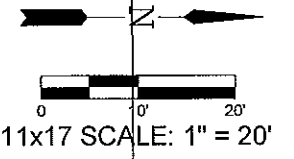
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Golden Gate City Stormwater
 48TH STREET S.W. (STA. 11+50+00-14+50)
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DATE:	AUG 2013
SUBMITTAL TYPE:	
	DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671
	SHEET 21 OF 33

C:\PROJ\ENG\CCU\CCU146\DWG\SUBMITTYPE\SP\CCU146_P&E_48TH ST_9/27/2013_2:55 PM



LEGEND

TOS	TOE OF SLOPE
ESMT	EDGE OF WATER
CB	BLOW-OFF VALVE
CS	FLOW DIRECTION
DBI	PROPOSED GRADE
JB	EXISTING GRADE
MES	
PE	
TI	
TOB	

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.

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 Bonita Springs, Florida 34134

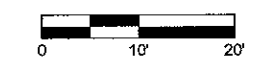
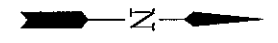
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Golden Gate City Stormwater

48TH STREET S.W. (STA. 14+50+00-17+50)

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER
SWC/TWN/RGE:	21-22/49S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	
DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671	SHEET 22 OF 33



11x17 SCALE: 1" = 20'

S-22
STA 18+73.13 18.64 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (N) 8.43 (12" CMP)
(BY OTHERS)

S-23
STA 19+17.89 19.75 LT
CONST MITERED END SECTION (4:1)
FDOT INDEX 272
IE (S) 8.56 (12" CMP)
(BY OTHERS)

DBI-44
TYPE: "X"
GRATE ELEV.: 8.60
INV: 5.60 (N)
BOTT: 4.60

DBI-45
TYPE: "X"
GRATE ELEV.: 8.60
INV: 5.60 (S)
BOTT: 4.60

DBI-42
TYPE: "X"
GRATE ELEV.: 9.60
INV: 6.60 (N)
BOTT: 5.60

DBI-43
TYPE: "X"
GRATE ELEV.: 9.60
INV: 6.60 (S)
BOTT: 5.60

15 LF OF 12" CMP @
0.00% (BY OTHERS)
EX. 60' R/W

6 LF OF 12" CMP @
0.00% (BY OTHERS)

20 LF OF 12" PVC @ 0.00%
(DIRECTIONAL DRILL)

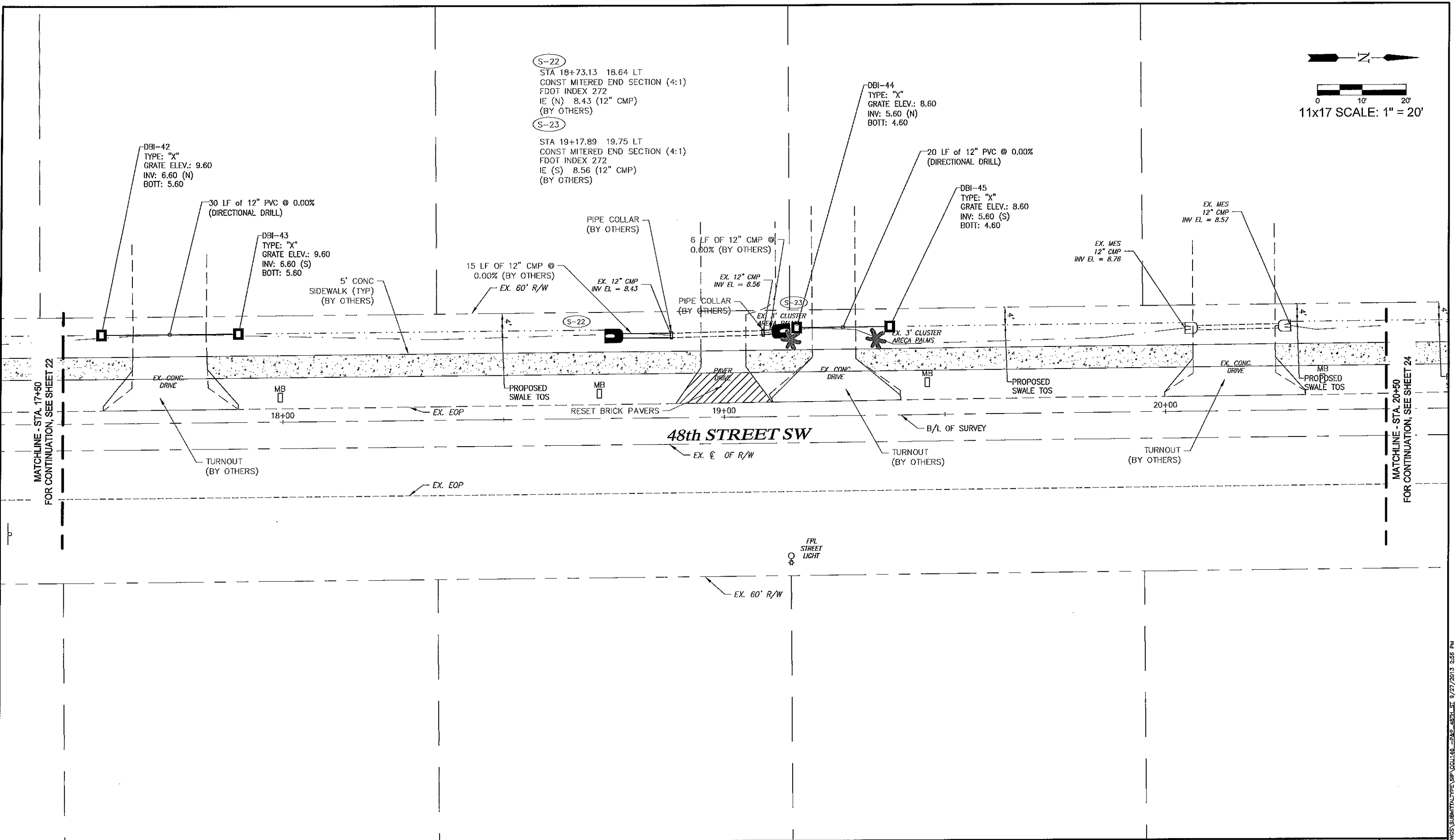
EX. MES
12" CMP
INV EL = 8.57

EX. MES
12" CMP
INV EL = 8.76

MATCHLINE - STA. 17+50
FOR CONTINUATION, SEE SHEET 22

MATCHLINE - STA. 20+50
FOR CONTINUATION, SEE SHEET 24

48th STREET SW



LEGEND

ESMT	LANDSCAPE BUFFER ESMT
CS	EASEMENT
CB	CATCH BASIN
CS	CONTROL STRUCTURE
DBI	DITCH BOTTOM INLET
JB	JUNCTION BOX
MES	MITERED END SECTION
PE	PIPE END w/RIP RAP
TI	THROAT INLET
TOB	TOP OF BANK

TOS	TOE OF SLOPE
EW	EDGE OF WATER
BOV	BLOW-OFF VALVE
→	FLOW DIRECTION
(---)	PROPOSED GRADE
(---)	EXISTING GRADE

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
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Business LC 20000286

Golden Gate City Stormwater

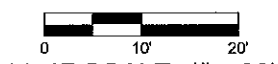
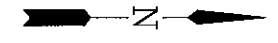
48TH STREET S.W. (STA. 17+50+00-20+50)

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

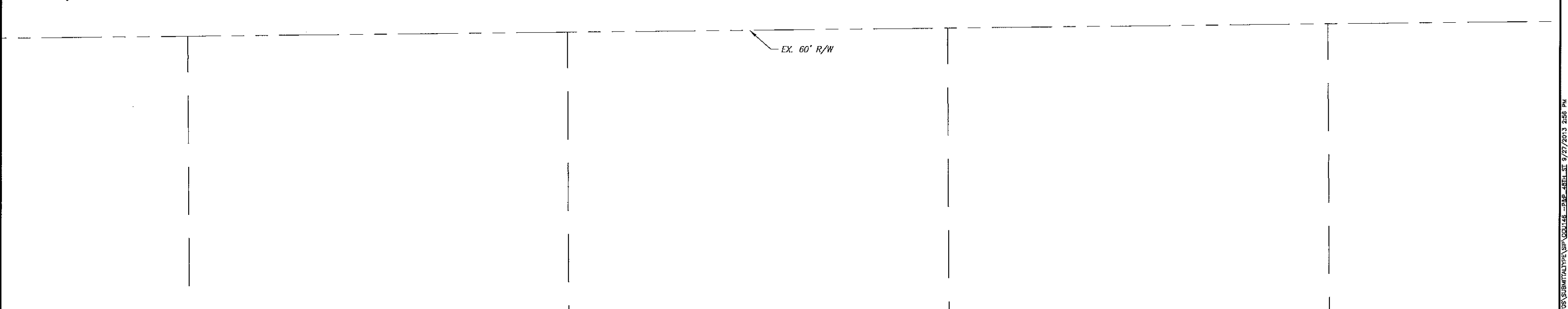
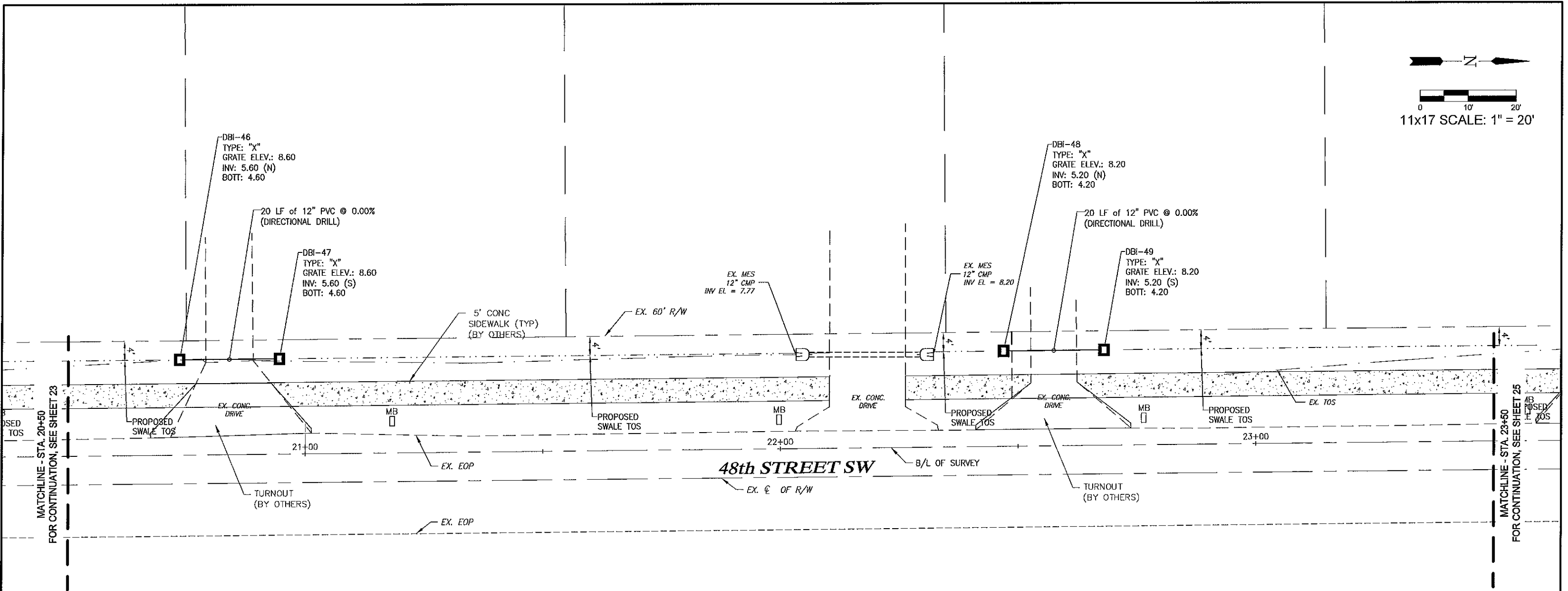
MUNICIPALITY:	COLLIER
SEC./TRN./RGE:	21-22/48S/28E
DATE:	AUG 2013
SUBMITTAL TYPE:	
SHEET 23 OF 33	

DAVID W. SCHMITT, P.E.
FLORIDA P.E. LICENSE NO. 41671

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11x17 SCALE: 1" = 20'



LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	→	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	—(0.00)—	PROPOSED GRADE
JB	JUNCTION BOX	—	EXISTING GRADE
MES	METERED END SECTION		
PE	PIPE END w/RIP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	
HORIZ.	

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Golden Gate City Stormwater

48TH STREET S.W. (STA. 20+50+00-23+50)

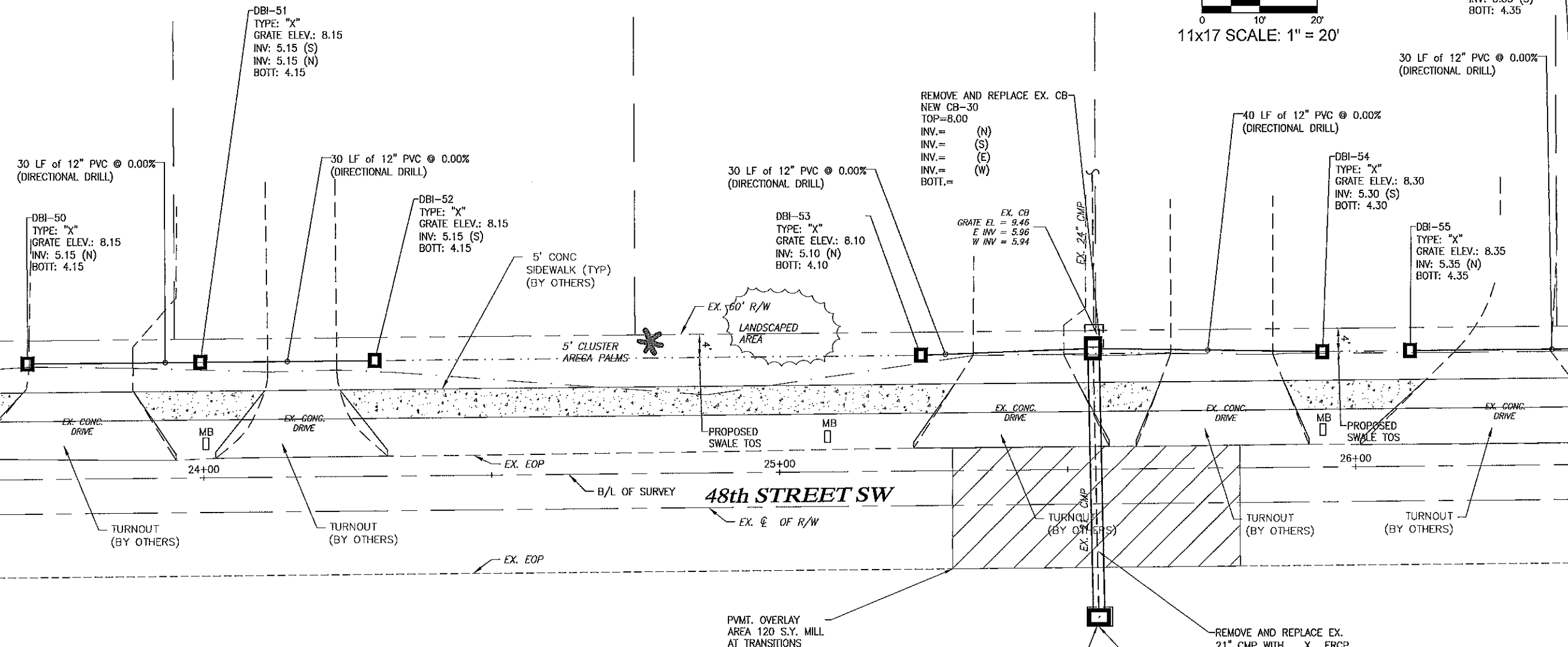
ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER
SEC./TWN/RGE:	21--22/48S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	
DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671	SHEET 24 OF 33

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DBI-56
 TYPE: "X"
 GRATE ELEV.: 8.35
 INV: 5.35 (S)
 BOT: 4.35



LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EDW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	PG	PROPOSED GRADE
JB	JUNCTION BOX	EG	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/ RIP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	
HORIZ.	

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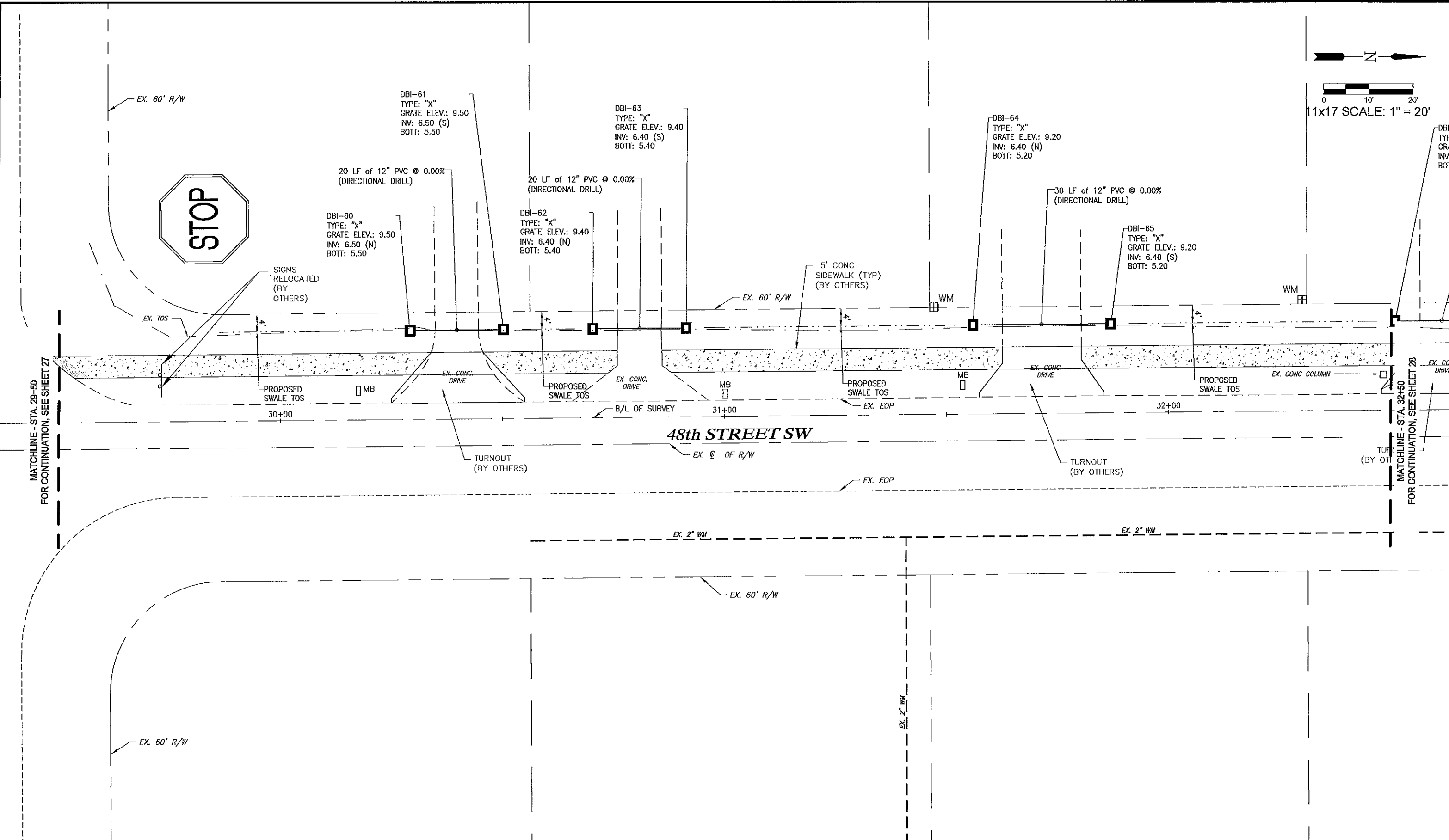
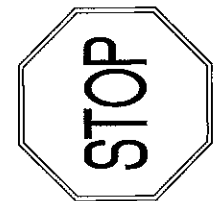
Golden Gate City Stormwater

48TH STREET S.W. (STA. 23+50+00-26+50)

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER
SEC/TWN/RGE:	21-22/49S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	
DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	
HORIZ.	

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LEGEND

ESMT	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
CB	CATCH BASIN	EW	EDGE OF WATER
CS	CONTROL STRUCTURE	BOV	BLOW-OFF VALVE
DBI	DITCH BOTTOM INLET	FD	FLOW DIRECTION
JB	JUNCTION BOX	PG	PROPOSED GRADE
MES	MITERED END SECTION	EG	EXISTING GRADE
PE	PIPE END w/ RIP RAP		
TI	THROAT INLET		
TOB	TOP OF BANK		

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	
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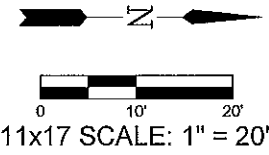
Golden Gate City Stormwater

48TH STREET S.W. (STA. 29+50+00-32+50)

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER	SHEET 27 OF 33
SEC./TWN/RGCR:	21-22/49S/26E	
DATE:	AUG 2013	
SUBMITTAL TYPE:		

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DBI-58
TYPE: "X"
GRATE ELEV.: 9.00
INV: 5.40 (S)
INV: 5.00 (N)
BOTT: 4.00

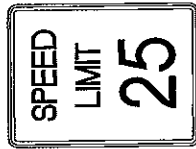
35 LF of 12" PVC @ 0.00%
(DIRECTIONAL DRILL)

DBI-57
TYPE: "X"
GRATE ELEV.: 8.40
INV: 5.40 (N)
BOTT: 4.40

40 LF of 12" PVC @ 0.00%
(DIRECTIONAL DRILL)

DBI-59
TYPE: "X"
GRATE ELEV.: 9.00
INV: 5.00 (S)
BOTT: 4.00

5' CONC
SIDEWALK (TYP)
(BY OTHERS)



SIGNS RELOCATED
(BY OTHERS)

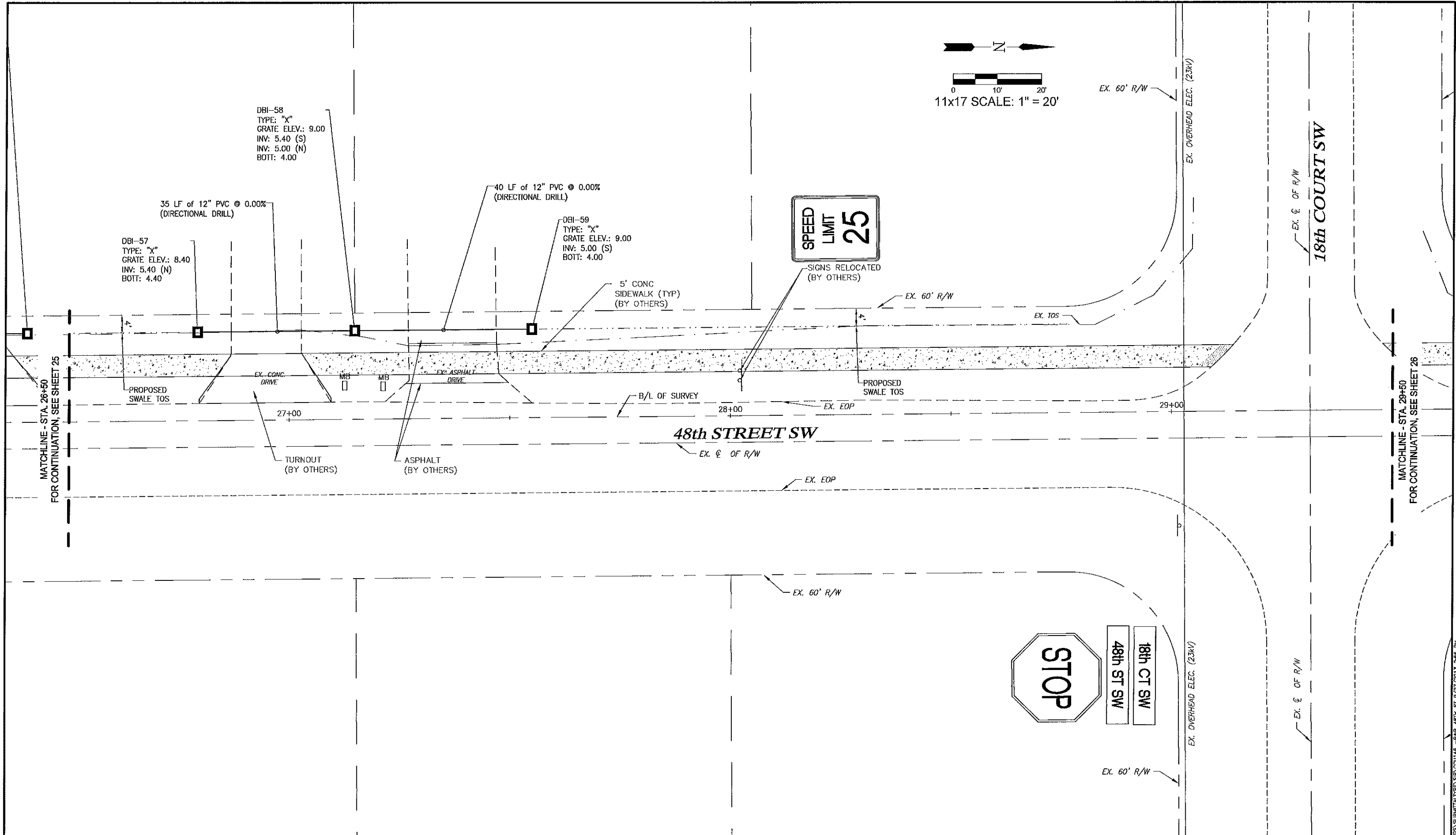
EX. 60' R/W

EX. OVERHEAD ELEC. (23KV)

EX. ϕ OF R/W
18th COURT SW

MATCHLINE - STA. 26+50
FOR CONTINUATION, SEE SHEET 25

MATCHLINE - STA. 29+50
FOR CONTINUATION, SEE SHEET 26



LEGEND	
LBE	LANDSCAPE BUFFER ESMT
ESMT	EASEMENT
CB	CATCH BASIN
CS	CONTROL STRUCTURE
DBI	DITCH BOTTOM INLET
JB	JUNCTION BOX
MES	MITERED END SECTION
PE	PIPE END w/ RIP RAP
TI	THROAT INLET
TOS	TOP OF BANK
TOS	TOE OF SLOPE
EOW	EDGE OF WATER
BOV	BLOW-OFF VALVE
FD	FLOW DIRECTION
(---)	PROPOSED GRADE
(---)	EXISTING GRADE

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU146
SCALE: VERT. AS NOTED	HORIZ.

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Golden Gate City Stormwater
 48TH STREET S.W. (STA. 26+50+00-29+50)

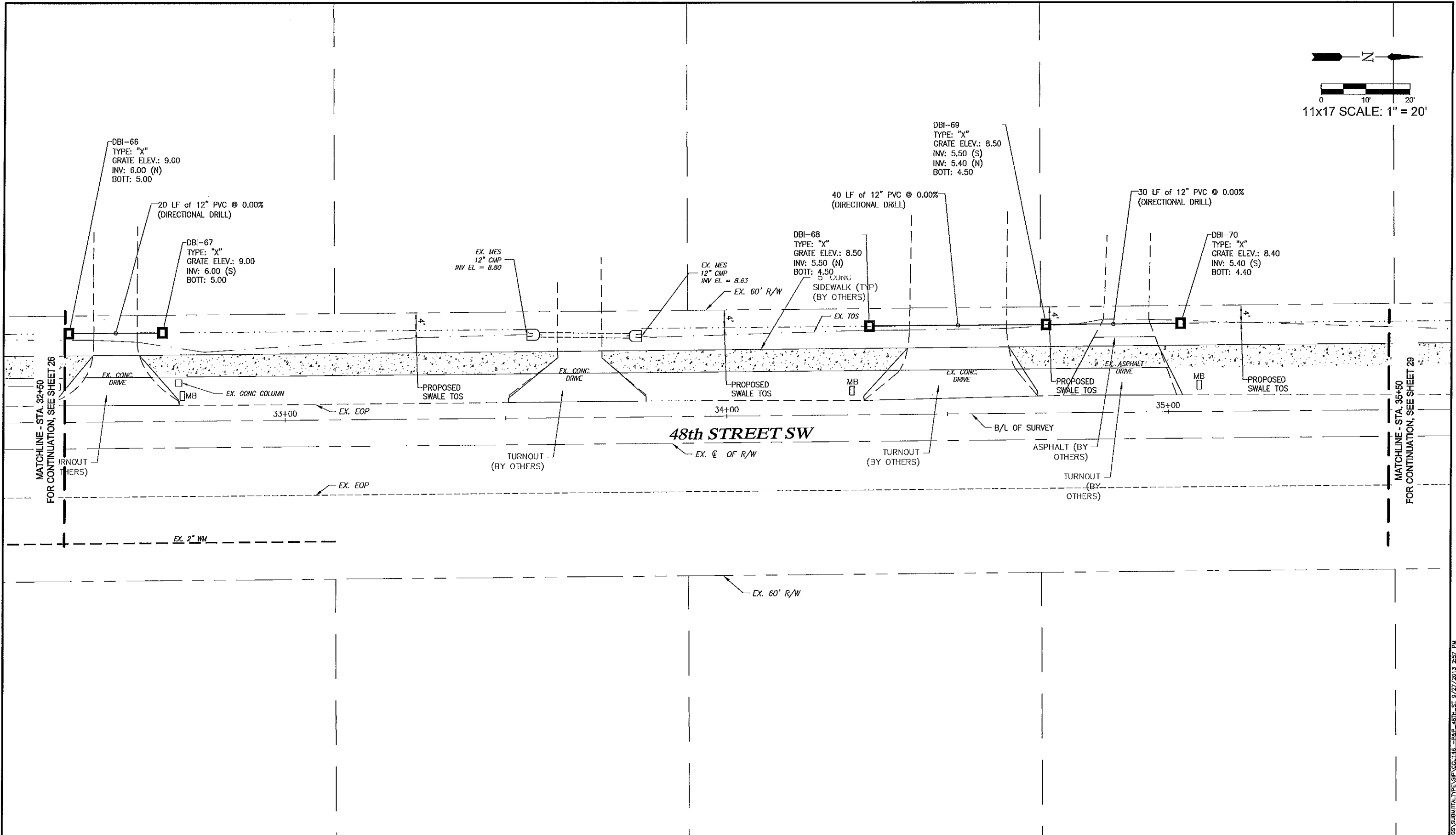
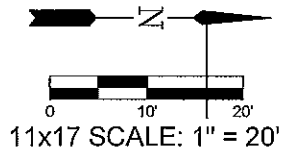
ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:
COLLIER
 SEC./TWN/RGE:
21-22/49S/28E
 DATE:
AUG 2013
 SUBMITTAL TYPE:

DAVID W. SCHMITT, P.E.
FLORIDA P.E. LICENSE NO. 41671

SHEET 26 OF 33

C:\PROG-ENG\CCU146\DWG\SUBMITTAL\PE\DWG\48TH ST SW 26.DWG SUBMITTED: 9/27/2013 2:56 PM



LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EDW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	(---)	PROPOSED GRADE
JR	JUNCTION BOX	(---)	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/ RIP RAP		
TI	THRUST INLET		
TOS	TOP OF BANK		

Revision	Date	Description

DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODE: CCU146
 SCALE: VERT. AS NOTED
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Golden Gate City Stormwater

48TH STREET S.W. (STA. 32+50+00-35+50)

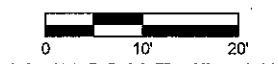
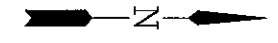
ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLIER
 SEC/TWN/RGE: 21-22/49S/26E
 DATE: AUG 2013
 SUBMITTAL TYPE: _____

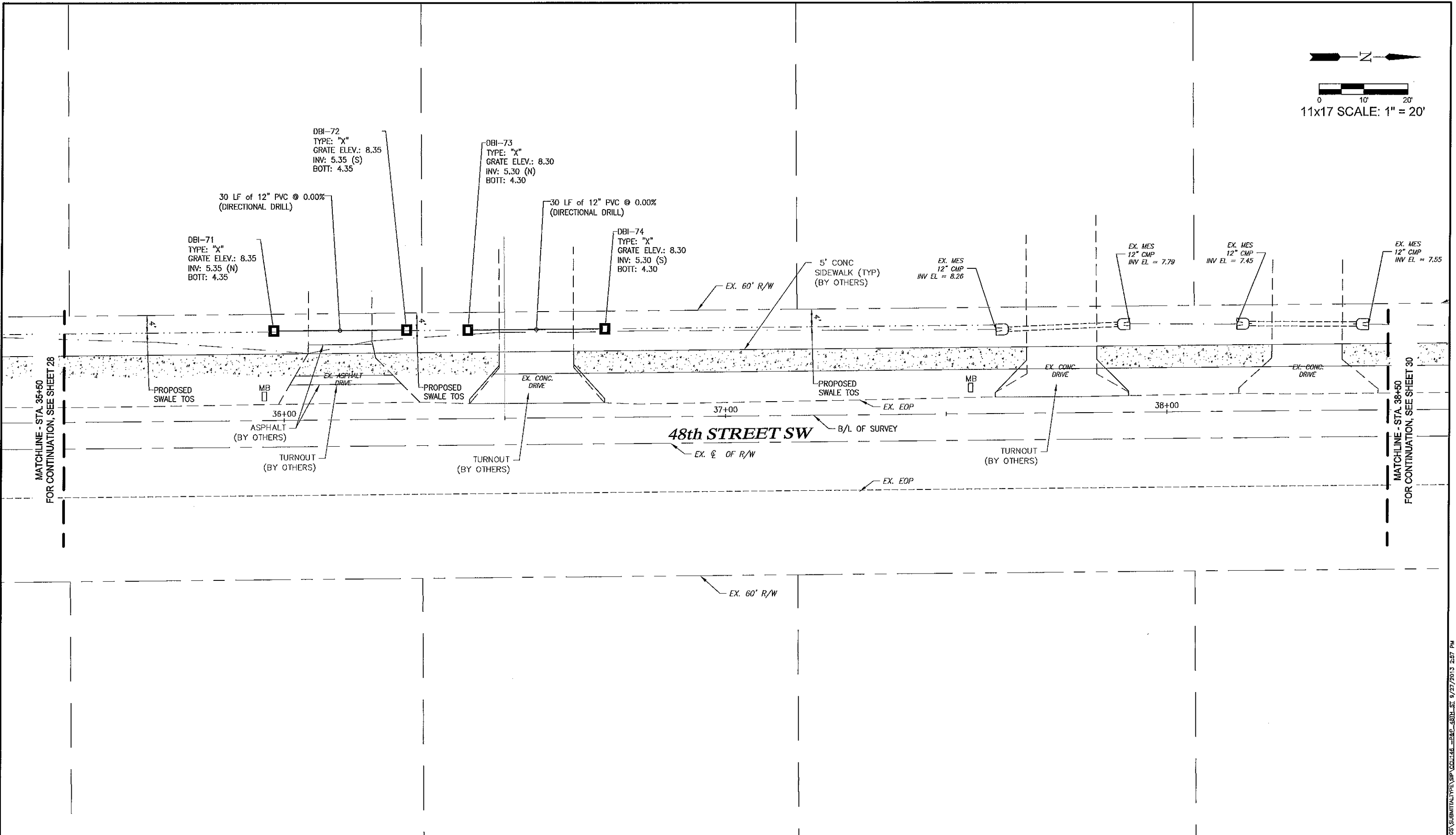
DAVID W. SCHMITT, P.E.
 FLORIDA P.E. LICENSE NO. 41671

SHEET 28 OF 33

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11x17 SCALE: 1" = 20'



MATCHLINE - STA. 35+50
FOR CONTINUATION, SEE SHEET 28

MATCHLINE - STA. 38+50
FOR CONTINUATION, SEE SHEET 30

48th STREET SW

LEGEND

TOS	TOE OF SLOPE
EOW	EDGE OF WATER
BOV	BLOW-OFF VALVE
FD	FLOW DIRECTION
(---)	PROPOSED GRADE
(---)	EXISTING GRADE

LBE	LANDSCAPE BUFFER ESMT
ESMT	EASEMENT
CB	CATCH BASIN
CS	CONTR. STRUCTURE
DBI	DITCH BOTTOM INLET
JB	JUNCTION BOX
MES	MITERED END SECTION
PE	PIPE END w/ RIP RAP
TI	THROAT INLET
TOS	TOP OF BANK

Revision	Date	Description	By

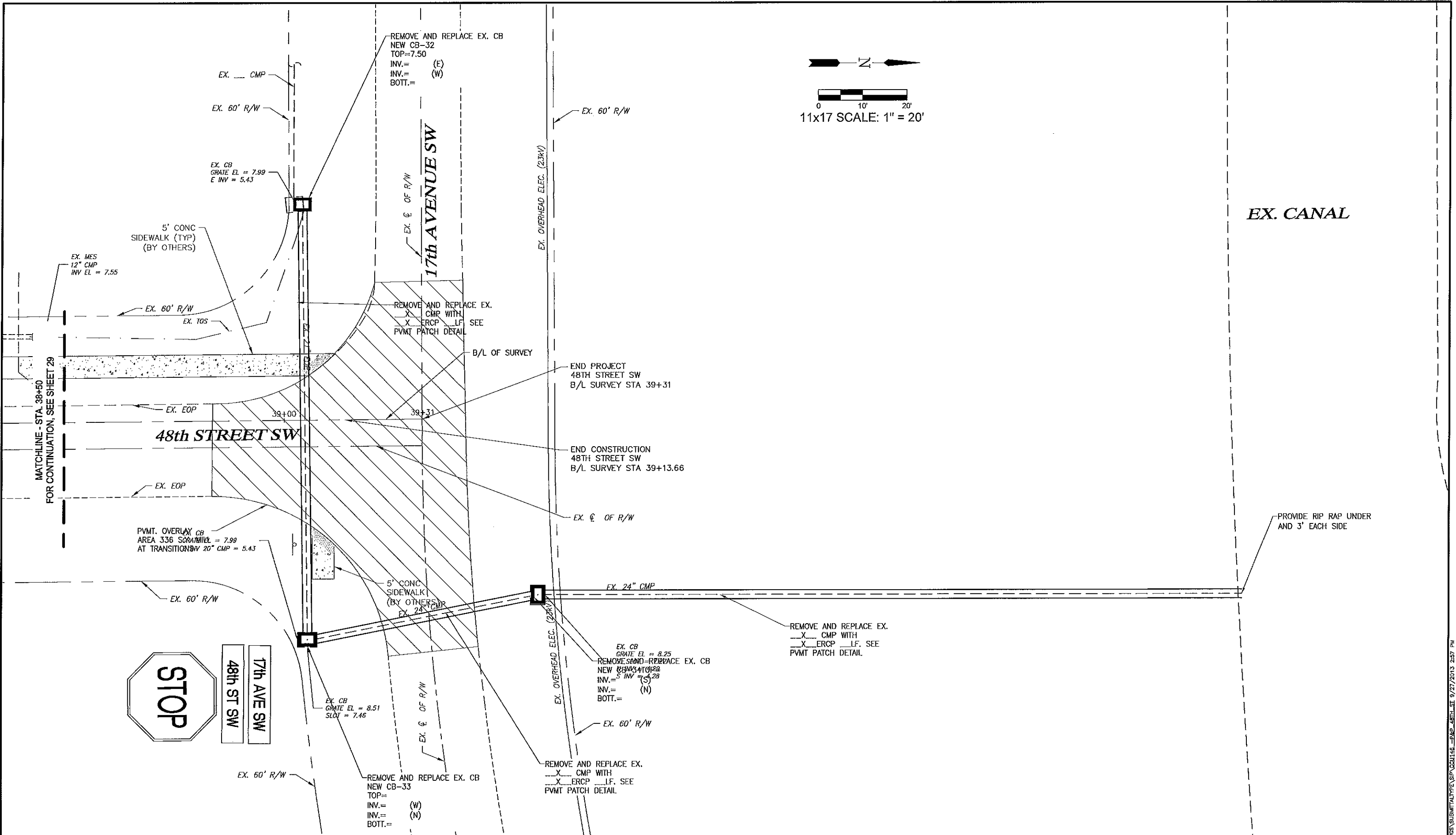
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DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU148
SCALE: VERT. AS NOTED	HORIZ.

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Golden Gate City Stormwater
 48TH STREET S.W. (STA. 35+50+00-38+50)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY:	COLLIER
SEC/TWR/RGE:	21-22/49S/28E
DATE:	AUG 2013
SUBMITTAL TYPE:	
SHEET 29 OF 33	

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EX. CANAL

PROVIDE RIP RAP UNDER AND 3' EACH SIDE

LEGEND

LBE	LANDSCAPE BUFFER ESMT	TOS	TOE OF SLOPE
ESMT	EASEMENT	EW	EDGE OF WATER
CB	CATCH BASIN	BOV	BLOW-OFF VALVE
CS	CONTROL STRUCTURE	FD	FLOW DIRECTION
DBI	DITCH BOTTOM INLET	(D.G.)	PROPOSED GRADE
JB	JUNCTION BOX	---	EXISTING GRADE
MES	MITERED END SECTION		
PE	PIPE END w/ RIP RAP		
TI	THRIFT INLET		
TOS	TOP OF BANK		

Revision	Date	Description	By

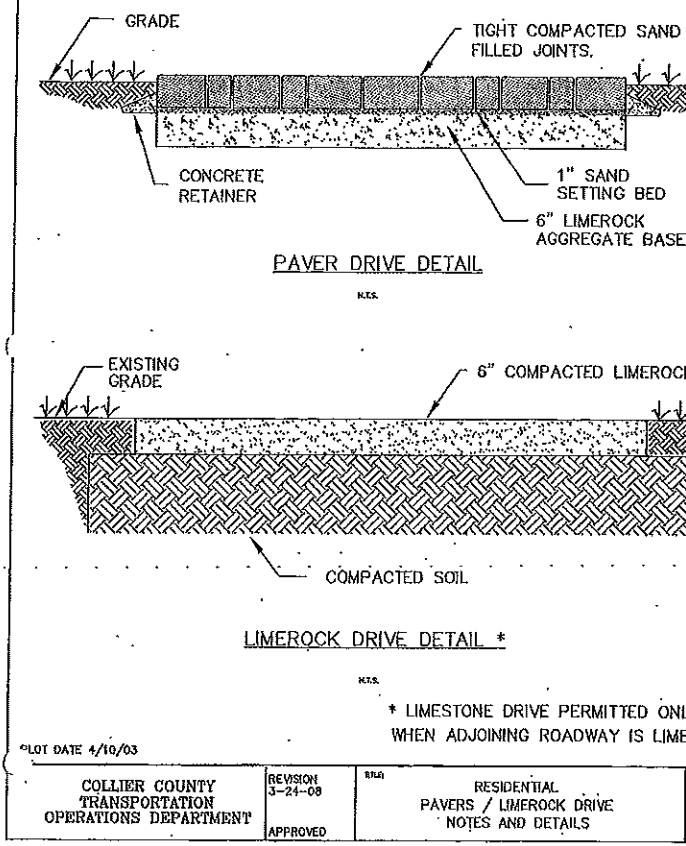
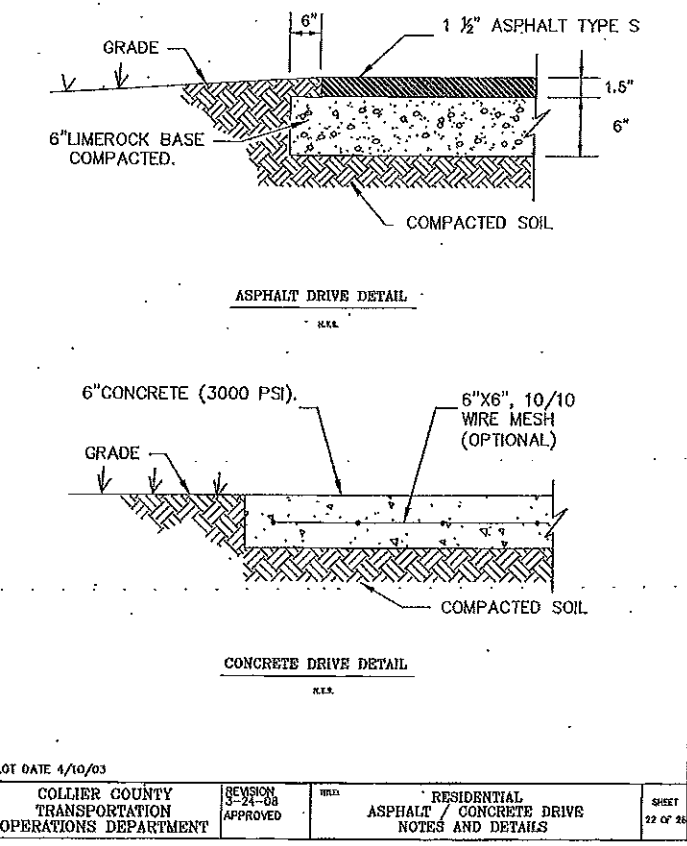
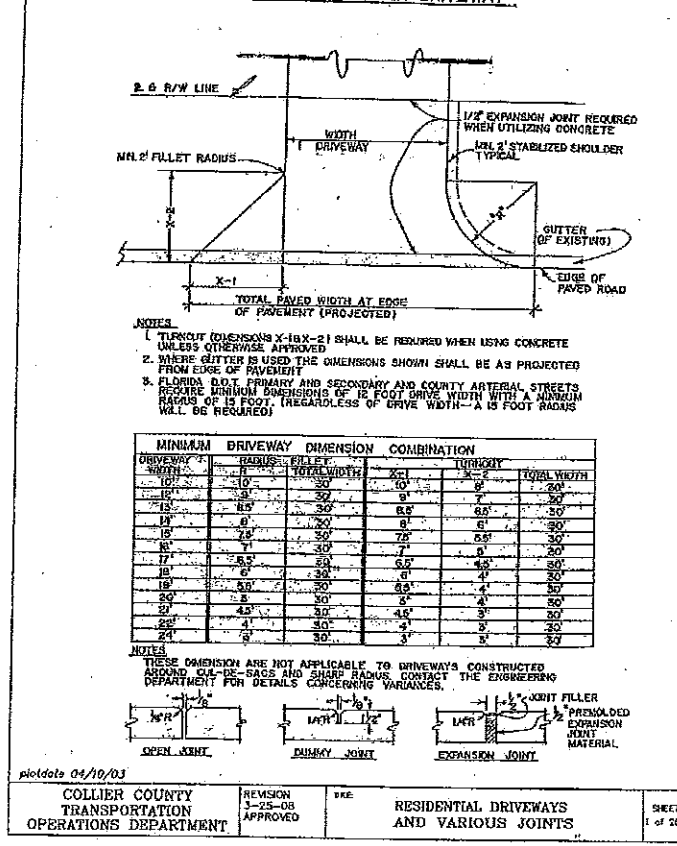
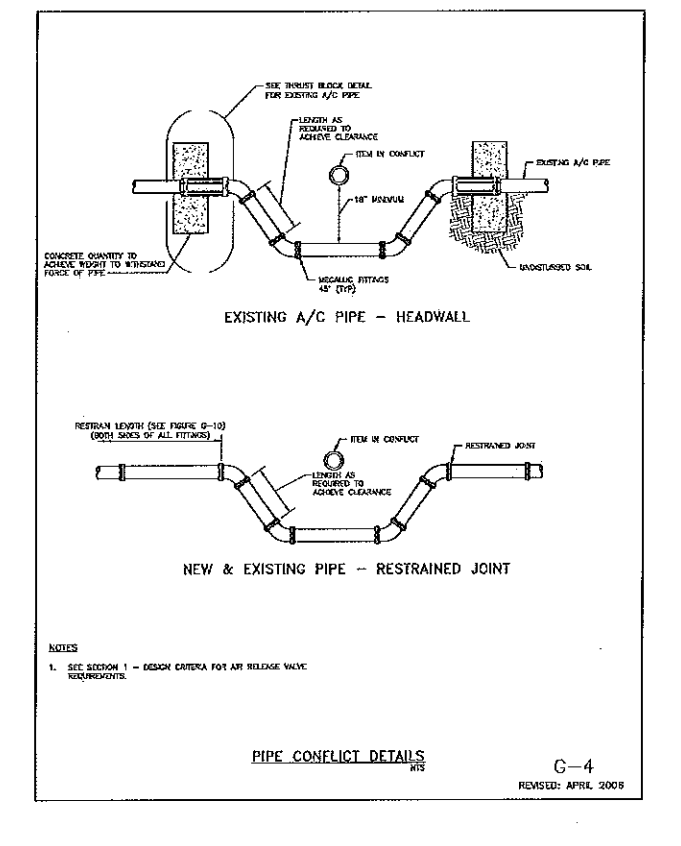
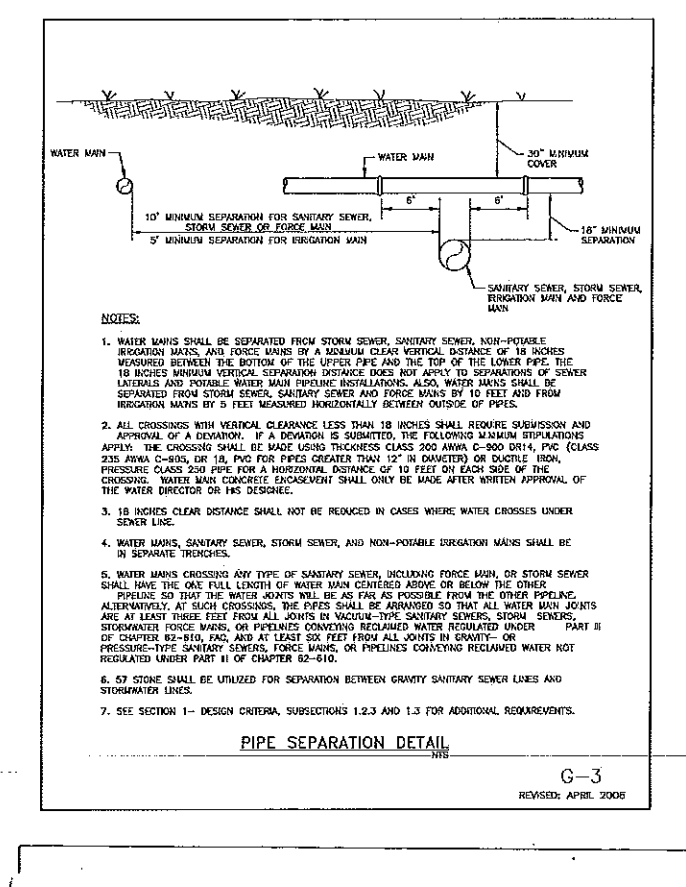
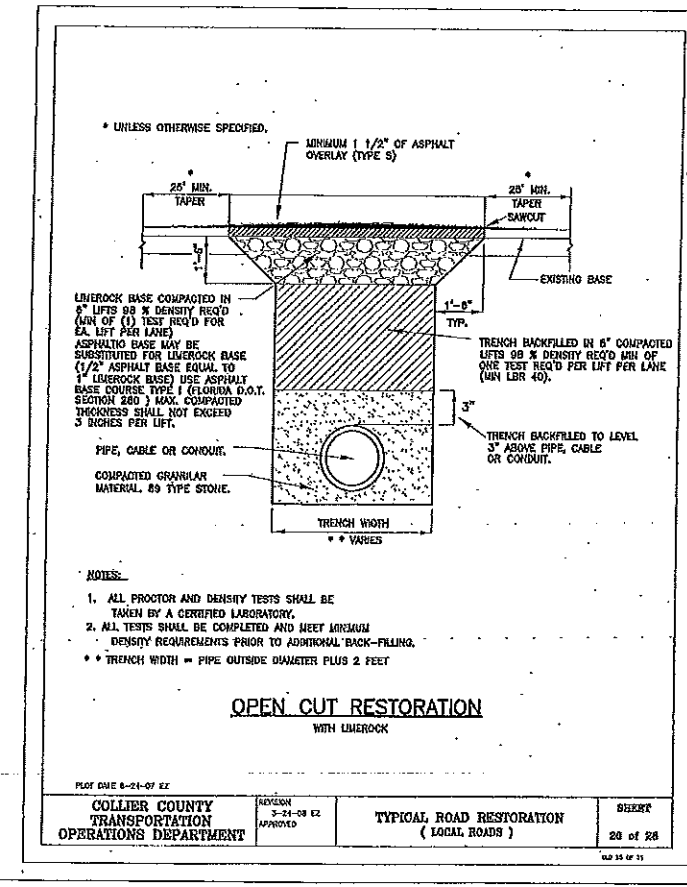
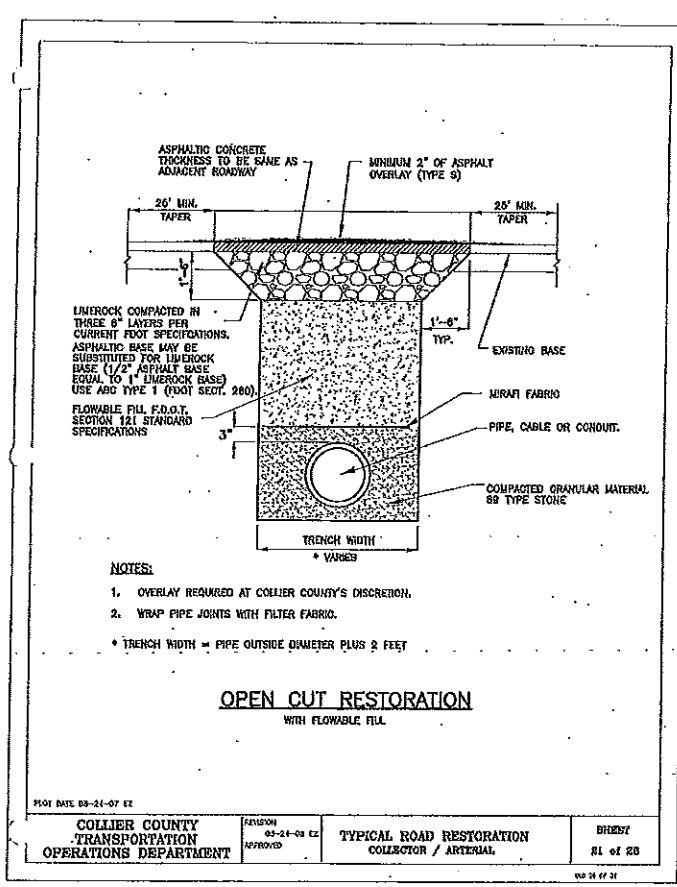
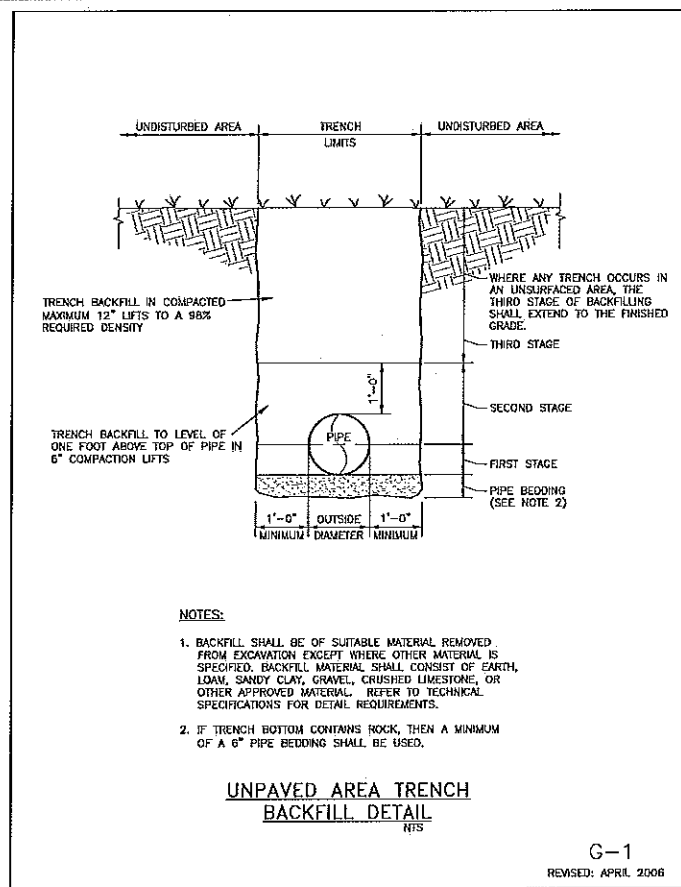
DESIGNED BY: D.W.S.
 DRAWN BY: M.E.S.
 APPROVED: D.W.S.
 JOB CODES: CCU148
 SCALE: VERT. AS NOTED
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Golden Gate City Stormwater
 48TH STREET S.W. (STA. 38+50+00-39+50)
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

MUNICIPALITY: COLLER	SHEET 30 OF 33
SEC./TWN./RGE: 21-22/49S/28E	
DATE: AUG 2013	
SUBMITTAL TYPE: 	

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LEGEND

Revision	Date	Description

DESIGNED BY: D.W.S.
DRAWN BY: M.E.S.
APPROVED: D.W.S.
JOB CODE: CCU146
SCALE: VERT. AS NOTED
HORIZ.

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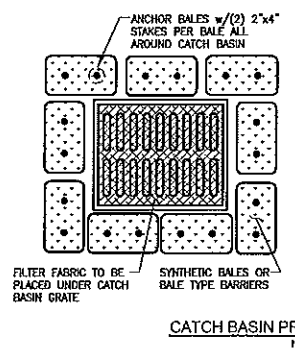
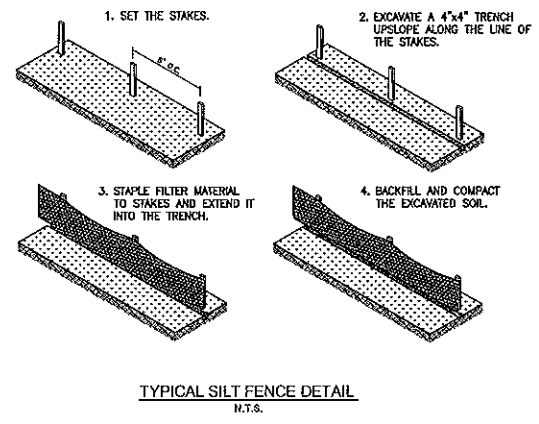
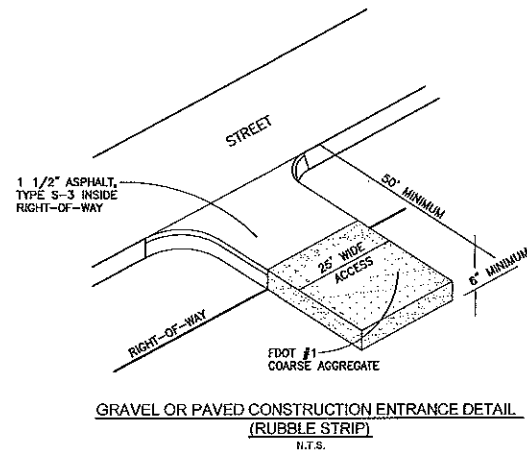
Golden Gate City Stormwater
MISCELLANEOUS DETAILS

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

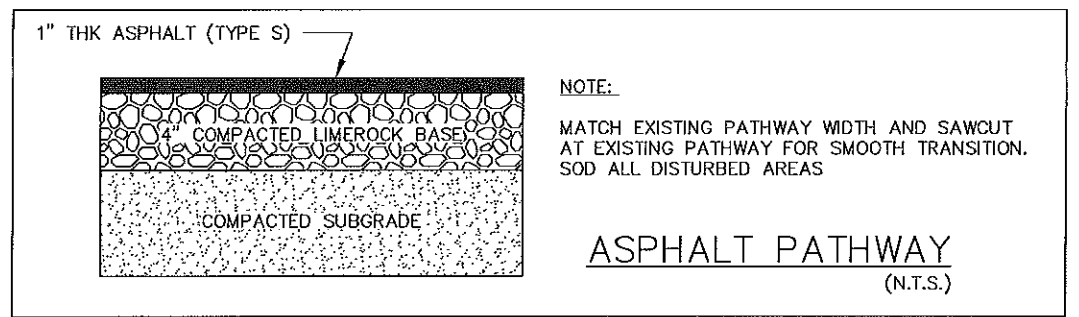
MUNICIPALITY: COLLIER
SEC./TWN./RGE: 21-22/49S/26E
DATE: AUG 2013
SUBMITTAL TYPE: _____

DAVID W. SCHMITT, P.E.
FLORIDA P.E. LICENSE NO. 41671

SHEET 31 OF 33



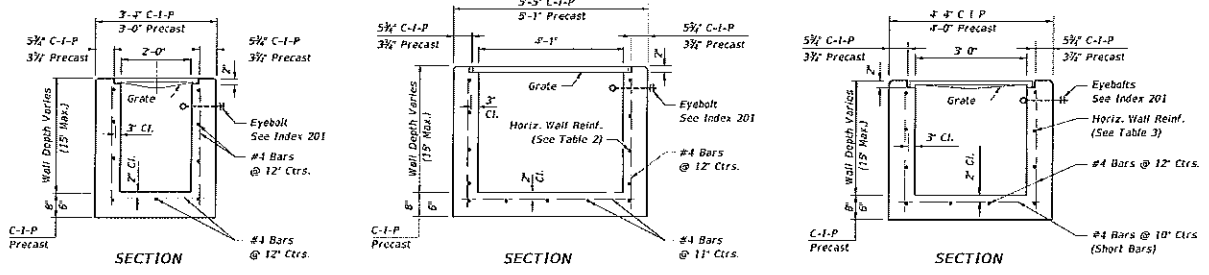
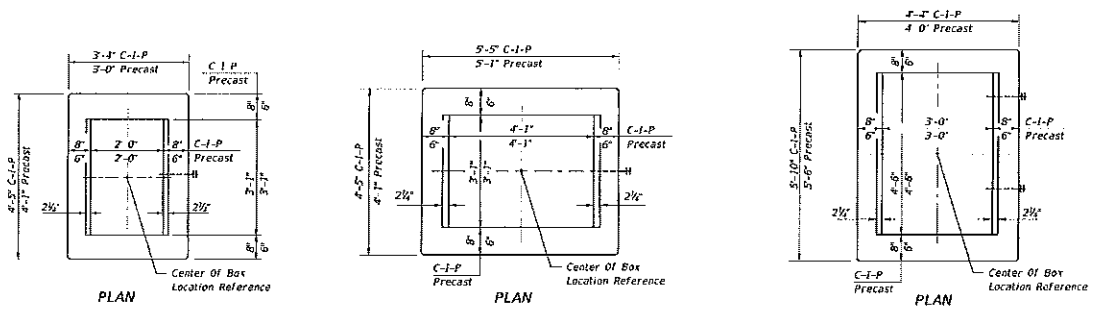
- NOTES:**
- BALES SHOULD BE ANCHORED w/2-1"x2" (OR 1" DIA.)x4" WOOD STAKES. STAKES OF OTHER MATERIAL OR SHAPE PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY ENGINEER. STAKES OTHER THAN WOOD SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
 - RAILS AND POSTS SHALL BE 2"x4" WOOD. OTHER MATERIALS PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY ENGINEER.
 - ADJACENT BALES SHALL BE BUTTED FIRMLY TOGETHER.
 - WHERE USED IN CONJUNCTION w/SILT FENCE, BALES SHALL BE PLACED ON THE UPSTREAM SIDE OF THE FENCE.



- NOTES:**
- CONTRACTOR TO DEMOLISH AND REMOVE ALL IMPROVEMENTS WITHIN LIMITS OF DEMOLITION SHOWN UNLESS OTHERWISE NOTED.
 - CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES PRIOR TO DEMOLITION.
 - THE CONTRACTOR SHALL UTILIZE SUITABLE EROSION CONTROL DURING DEMOLITION.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE LEGAL DISPOSAL OF ALL DEMOLITION DEBRIS OFF OWNERS PROPERTY.
 - THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. THIS SHALL INCLUDE WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.
 - THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT AND ARE NOT IDENTIFIED TO BE REMOVED.
 - REMOVAL OF ASBESTOS CONTAINING MATERIALS (IF ANY) SHALL BE IN ACCORDANCE WITH THE REGULATORY STANDARDS.

LEGEND			DESIGNED BY: D.W.S.	<p>GradyMinor Civil Engineers • Land Surveyors • Planners • Landscape Architects Cert. of Auth. ER 0005151 Cert. of Auth. LB 0005151 Donita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380</p>	Golden Gate City Stormwater		MUNICIPALITY: COLLIER
			DRAWN BY: M.E.S.		STORMWATER POLLUTION		SEC/TWN/RGE: 21-22/49S/28E
			APPROVED: D.W.S.				DATE: AUG 2013
			JOB CODE: CCU146				SUBMITTAL TYPE: _____
			SCALE: VERT. AS NOTED HORIZ.				DAVID W. SCHMITT, P.E. FLORIDA P.E. LICENSE NO. 41671
Revision	Date	Description	By			ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88) CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'	SHEET 32 OF 33

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HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 1)

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WVWF
0'-15"	A12	0.20	12"	8"

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 2)

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WVWF
0'-6"	A13	0.20	12"	8"
0'-10"	A6	0.20	6"	5"
10'-13"	A4	0.20	4"	3"
10'-15"	B5.5	0.24	5 1/2"	5"

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 3)

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WVWF
0'-5"	A12	0.20	12"	8"
0'-7.5"	A6	0.20	6"	5"
7.5'-10"	B5.5	0.24	5 1/2"	5"
10'-15"	C6.5	0.37	6 1/2"	6"

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 4)

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WVWF
0'-5"	B5.5	0.24	5 1/2"	5"
5'-7"	C6.5	0.37	6 1/2"	6"
7'-15"	D4.5	0.53	4 1/2"	4"

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 5)

WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING BARS	WVWF
0'-5"	C3.5	0.37	3 1/2"	3"
5'-10"	D4.5	0.53	4 1/2"	4"

TYPE C

TYPE D

TYPE E

TYPE H (2 & 3-GRATE INLET)

TYPE H (4-GRATE INLET)

Recommended Maximum Pipe Size:
 2'-0" Wall - 18" Pipe
 3'-1" Wall - 24" Pipe (18" where an 18" pipe enters a 2'-0" wall)

Recommended Maximum Pipe Size:
 3'-1" Wall - 24" Pipe
 4'-1" Wall - 36" Pipe

Recommended Maximum Pipe Size:
 3'-0" Wall - 24" Pipe
 4'-6" Wall - 36" Pipe

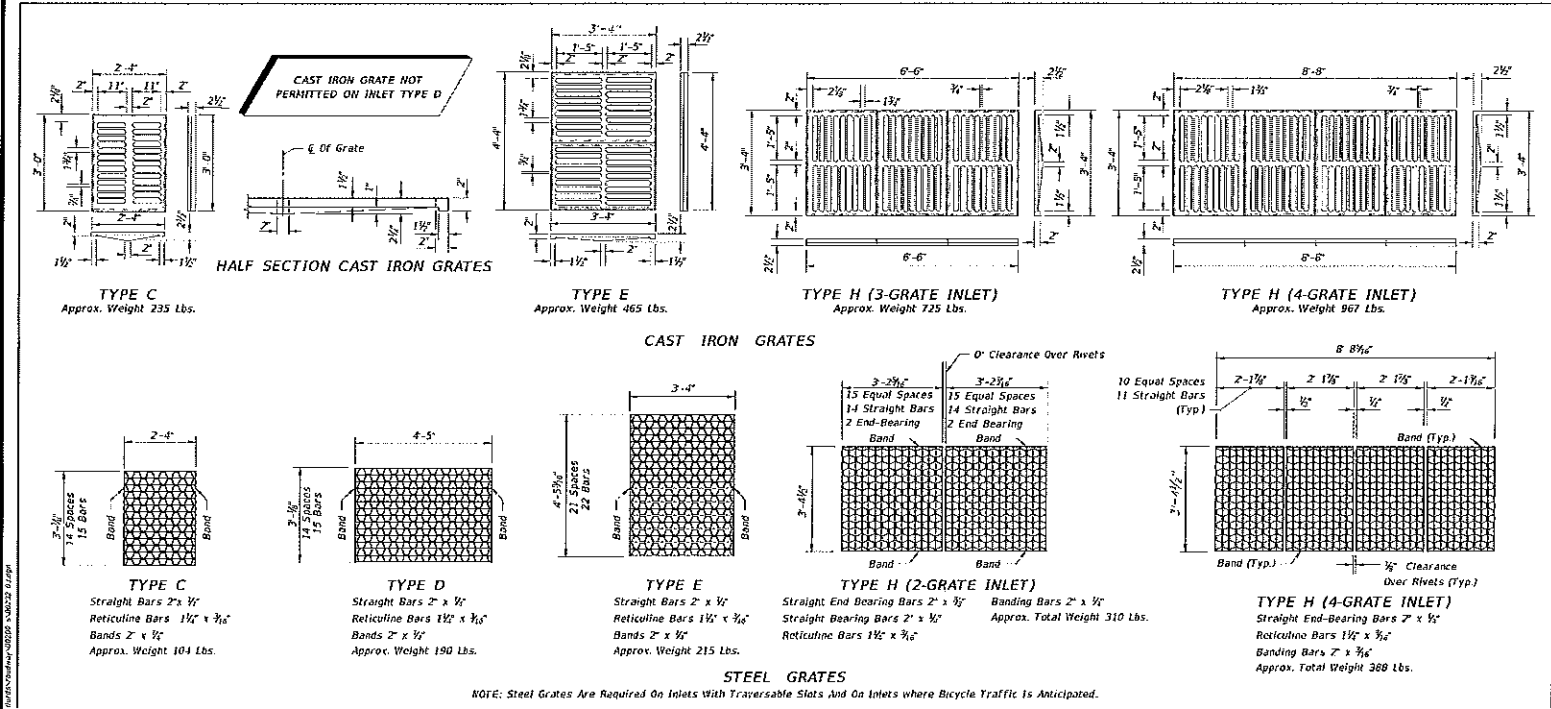
Recommended Maximum Pipe Size:
 3'-0" Wall - 24" Pipe
 6'-7" Wall - 1-60" Pipe
 Or 2-24" Pipe (5=3-3")

Recommended Maximum Pipe Size:
 3'-0" Wall - 24" Pipe
 8'-9" Wall - 1-78" Pipe
 Or 2-24" Pipe (5=4-3")

GENERAL NOTES
 See Sheet 3 of 7.

LAST REVISION 07/01/05	DESCRIPTION	FDOT DESIGN STANDARDS FY 2012/2013	DITCH BOTTOM INLET TYPES C, D, E AND H	INDEX NO. 232	SHEET NO. 1

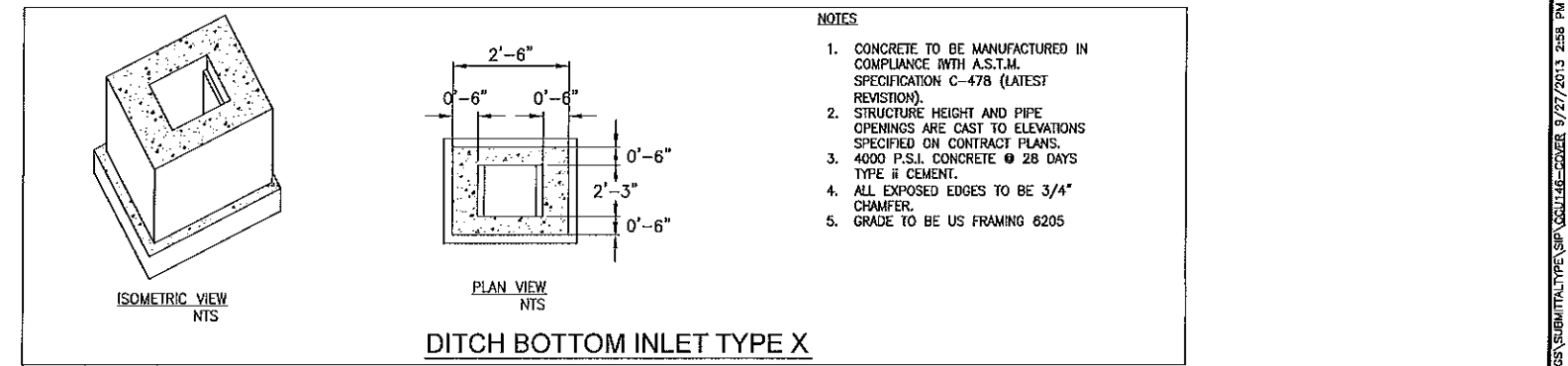
LAST REVISION 07/01/05	DESCRIPTION	FDOT DESIGN STANDARDS 2013	DITCH BOTTOM INLET TYPES C, D, E AND H	INDEX NO. 232	SHEET NO. 2



LEGEND			DESIGNED BY:	D.W.S.
			DRAWN BY:	M.E.S.
			APPROVED:	D.W.S.
			JOB CODE:	CCU148
			SCALE: VERT. AS NOTED	
			HORIZ.	
Revision	Date	Description	By	

GENERAL NOTES

- These inlets are suitable for bicycle traffic and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads. These inlets may be placed in areas subject to occasional pedestrian traffic such as landscaped areas and pavement areas where pedestrians can walk around the inlet.
- Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and areas subject to pedestrians shall have traversable slots. The traversable slot modification is not adaptable to inlet Type H. Slots may be constructed at either or both ends as shown on plans. Traversable slots shall not be used in areas subject to occasional bicycle traffic.
- Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dip galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
- Recommended maximum pipe sizes shown are for concrete pipe. Size for other types of pipe must be checked for fit.
- All exposed edges and corners shall be 1/4" chamfer or tool to 1/4" radius.
- Concrete inlet pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans; but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
- Traversable slots constructed in existing inlets shall be paid for as inlets partial. For conversion work and method of payment see TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS.
- Sodding to be used on all inlets not located in paved areas and paid for under contract unit price for Performance Turf, 5f.
- For supplementary details see Index No. 201.
- All reinforcing is Grade 60 bars with 2" min. cover unless otherwise noted. Bars to be cut or bent for 1 1/2" clearance around pipe opening. Provide one additional #4 bar above and at each side of pipe opening.



DITCH BOTTOM INLET TYPE X

NOTES

- CONCRETE TO BE MANUFACTURED IN COMPLIANCE WITH A.S.T.M. SPECIFICATION C-478 (LATEST REVISION).
- STRUCTURE HEIGHT AND PIPE OPENINGS ARE CAST TO ELEVATIONS SPECIFIED ON CONTRACT PLANS.
- 4000 P.S.I. CONCRETE @ 28 DAYS TYPE II CEMENT.
- ALL EXPOSED EDGES TO BE 3/4" CHAMFER.
- GRADE TO BE US FRAMING 6205

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU148
SCALE: VERT. AS NOTED	
HORIZ.	

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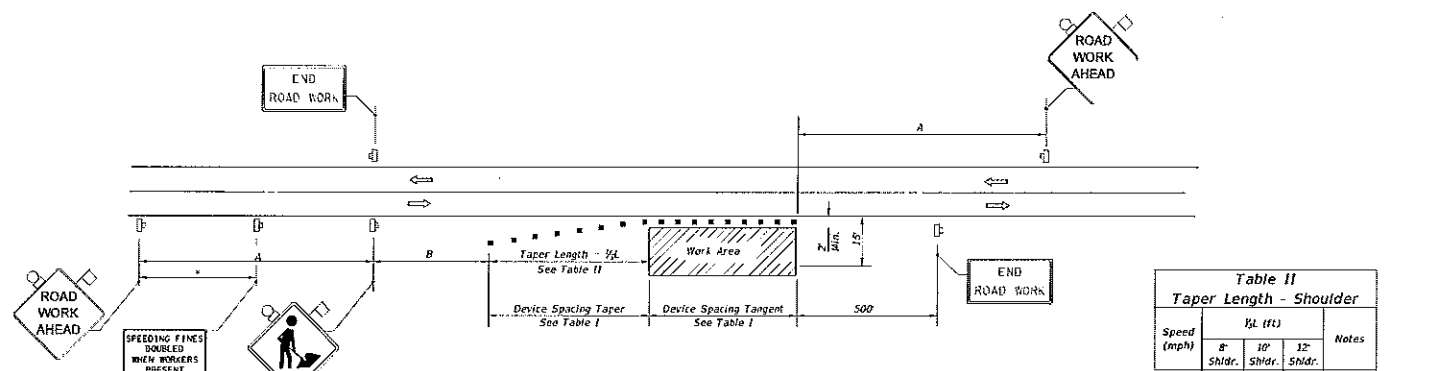
Golden Gate City Stormwater
STORMWATER DETAILS

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

DAVID W. SCHMITT, P.E.
 FLORIDA P.E. LICENSE NO. 41671

MUNICIPALITY:
 COLLIER
 SEC/TWR/RGE:
 21-22/49S/28E
 DATE:
 AUG 2013
 SUBMITTAL TYPE:

SHEET 33 OF 33



**Table II
Taper Length - Shoulder**

Speed (mph)	Tl (ft)			Notes
	8' Shldr.	10' Shldr.	12' Shldr.	
25	28	35	42	L=WS ^a 60
30	40	50	60	
35	55	68	82	L=WS
40	72	90	107	
45	120	150	180	L=WS
50	133	167	200	
55	147	183	220	L=WS
60	160	200	240	
65	173	217	260	L=WS
70	187	233	280	

**Table I
Device Spacing**

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

DISTANCE BETWEEN SIGNS

Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350
50 mph or greater	500	500

SYMBOLS

- Work Area
- Sign With 18" x 18" (Min) Orange Flag And Type B Light
- Channelizing Device (See Index No. 600)
- Work-Zone-Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

- When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index No. 603.
- SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
- When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
- For general TCZ requirements and additional information, refer to Index No. 600.

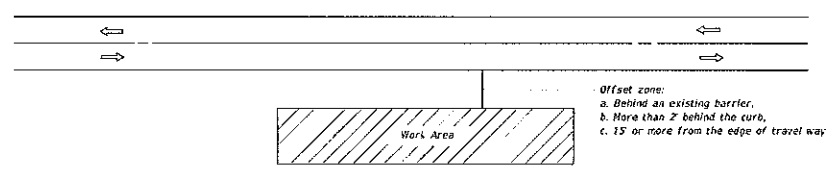
DURATION NOTES

- Signs and channelizing devices may be omitted if all of the following conditions are met:
 - Work operations are 60 minutes or less.
 - Vehicles in the work area have high intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRoACH THE AREA CLoSER THAN 15' BUT NOT CLoSER THAN 2' TO THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	TWO-LANE, TWO-WAY, WORK ON SHOULDER	INDEX NO. 602	SHEET NO. 1
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SYMBOLS

- Work Area
- Lane Identification + Direction of Traffic

GENERAL NOTES

- If the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in conformance with Index No. 600.
- No special signing is required.
- When a side road intersects the highway within the work area, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
- When construction activities encroach on a sidewalk refer to Index No. 600.
- For general TCZ requirements and additional information, refer to Index No. 600.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	TWO-LANE, TWO-WAY, WORK OUTSIDE SHOULDER	INDEX NO. 601	SHEET NO. 1
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LEGEND

Revision	Date	Description	By

DESIGNED BY:	D.W.S.
DRAWN BY:	M.E.S.
APPROVED:	D.W.S.
JOB CODE:	CCU14B
SCALE: VERT. AS NOTED	HORIZ.

GradyMinor

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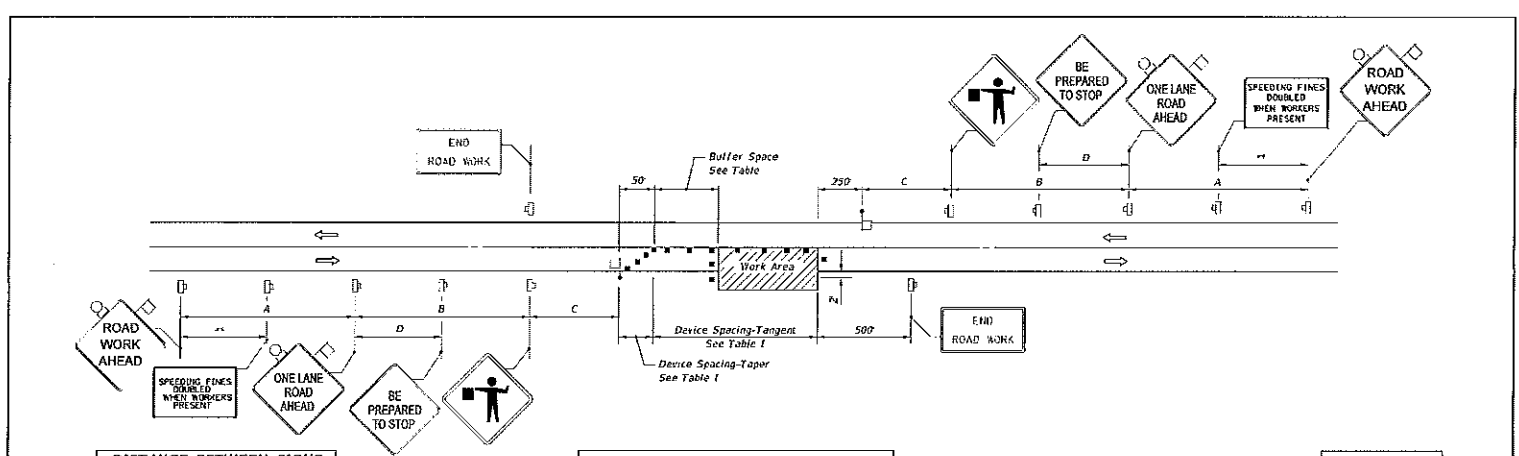
Golden Gate City Stormwater

MAINTENANCE OF TRAFFIC

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1985 (NAVD '85)
CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+) 1.27'

DAVID W. SCHMITT, P.E.
FLORIDA P.E. LICENSE NO. 41671

MUNICIPALITY:	COLLIER
SEC/TWN/RGE:	21-22/49S/26E
DATE:	AUG 2013
SUBMITTAL TYPE:	---
SHEET	34 OF 33



DISTANCE BETWEEN SIGNS

Speed (mph)	Spacing (ft.)			
	A	B	C	D
40 or less	200	200	200	100
45	350	350	350	175
50	500	500	500	250
55 or greater	2640	1640	1600	500

TABLE I DEVICE SPACING

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25 to 45	20	50	20	50
50 to 70	20	50	20	100

BUFFER SPACE

Speed (mph)	Dist. (ft.)
25	155
30	200
35	250
40	303
45	360
50	425
55	495
60	570
65	645
70	730

GENERAL NOTES

- Work operations shall be confined to one traffic lane, leaving the opposite lane open to traffic.
- Additional one-way control may be effected by the following means:
 - Flag-carrying vehicle;
 - Official vehicle;
 - Pilot vehicles;
 - Traffic signals.
- When flaggers are the sole means of one-way control, the flaggers shall be in sight of each other or in direct communication at all times.
- The ONE LANE ROAD signs are to be fully covered and the FLAGGER signs either removed or fully covered when no work is being performed and the highway is open to two-way traffic.
- When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
- The two channelizing devices directly in front of the work area and the one channelizing device directly at the end of the work area may be omitted provided vehicles in the work area have high intensity rotating, flashing, oscillating, or strobe lights operating.
- For general TCZ requirements and additional information, refer to Index No. 600.

DURATION NOTES

- ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:
 - Work operations are 60 minutes or less.
 - Speed limit is 45 mph or less.
 - No sight obstructions to vehicles approaching the work area for a distance equal to the buffer space.
 - Vehicles in the work area have high intensity, rotating, flashing, oscillating, or strobe lights operating.
 - Volume and complexity of the roadway has been considered.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRoACH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.

LAST REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS FY 2012/2013	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX NO. 603	SHEET NO. 1
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