CONSTRUCTION PLANS

FOR:

HANCOCK COMMONS

CLERMONT, FLORIDA

SITE DATA:

1. THE SUBJECT PARCEL IS ZONED C-2 . THE EXISTING LAND USE IS VACANT. THE PROPOSED LAND USE IS COMMERCIAL.

2. APPLICANT: HANCOCK COMMONS, LLC
951 MARKET PROMENADE
SUITE 2105
LAKE MARY, FLORIDA 32746
PHONE: (407) 804-8949

AGENT: SCOTT M. GENTRY, P.E.
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FL 32804
PHONE: (407)898-7858

ENGINEER: SCOTT M. GENTRY, P.E.
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FL 32804
PHONE: (407)898-7858

3. PROJECT SUMMARY:

HANCOCK COMMONS	593,552.64 S.F. = 13.63± AC
ASPHALT PAVING	356,933.35 S.F. = 8.19 AC
SIDEWALK	5,671 S.F. = .13 AC
OTHER IMPERVIOUS	2,489 S.F. = .06 AC
TOTAL IMPERVIOUS	365,093.35 S.F. = 8.38 AC
GREEN SPACE	228,459.29 S.F. = 5.24 AC
TOTAL	593,552.64 S.F. = 13.63± AC
OPEN SPACE/LANDSCAPE	228,459.29/593,552.64 = 38%
IMPERVIOUS SURFACE RATIO	62% IMPERVIOUS

PERVIOUS/IMPERVIOUS MAX. ALLOWABLE

PARCEL	TOTAL AREA (AC)	MAXIMUM IMPERVIOUS AREA (AC)	(%)	MINIMUM PERVIOUS AREA (AC)	(%)
LOT 1	1.21	.97	80	.24	20
LOT 2	1.07	.86	80	.21	20
LOT 3	1.57	1.26	80	.31	20
LOT 4	1.45	1.16	80	.29	20
LOT 5	8.33	6.65	80	1.67	20
TOTAL SITE	13.63	10.90	80	2.73	20
PROVIDED FOR LOT 5 UPON COMPLETION OF LOT 5					
LOT 5	8.33	5.46	66	2.87	34

4. BUILDING SETBACK REQUIREMENTS:

STATE ROAD 50:	150' FROM ℄
BUILDING SETBACK (SIDE):	12'
BUILDING SETBACK (REAR):	25'

5. PARKING SUMMARY:

REQUIRED / PROVIDED

RETAIL:
1 SPACE/200 S.F. FLOOR SPACE
= 27,200 S.F./200S.F. = 136 SPACES
REQUIRED= 136 SPACES
PROVIDED: 136 SPACES
ALLOWABLE COMPACT SPACES = 15 @ 10 PER 90 STANDARD SPACES.
PROVIDED = 12

RESTAURANT:
1 SPACE/50 S.F. AREA
DEVOTED TO PATRON USE -
10,500 TOTAL RESTAURANT AREA
ASSUMED 80% DEDICATED TO PATRON USE = 8,376 S.F.
8,400/50 = 168 SPACES + 1 SPACE /4 EMPLOYEES
ASSUMED 20 MAX. EMPLOYEES/4 = 5 SPACES
168 + 5 = 173 (173 SPACES)
REQUIRED= 173 SPACES
PROVIDED: 174 SPACES
ALLOWABLE COMPACT SPACES = 19 @ 10 PER 90 STANDARD SPACES.
PROVIDED = 18

SURVEYOR:
LEADING EDGE LAND SERVICES, INC.
6750 FORUM DRIVE, SUITE 310
ORLANDO, FL 32811
ATT: ROGER HARRAH
(407) 351-9691

GEOTECHNICAL:
ANDREYEV ENGINEERING, INC.
1170 W. MINNEOLA AVENUE
CLERMONT, FL 34711
(352) 241-0508

LANDSCAPE ARCHITECT:
HORTUS OASIS
1425 BERKSHIRE AVENUE
WINTER PARK, FL 32789
(407) 622-4886

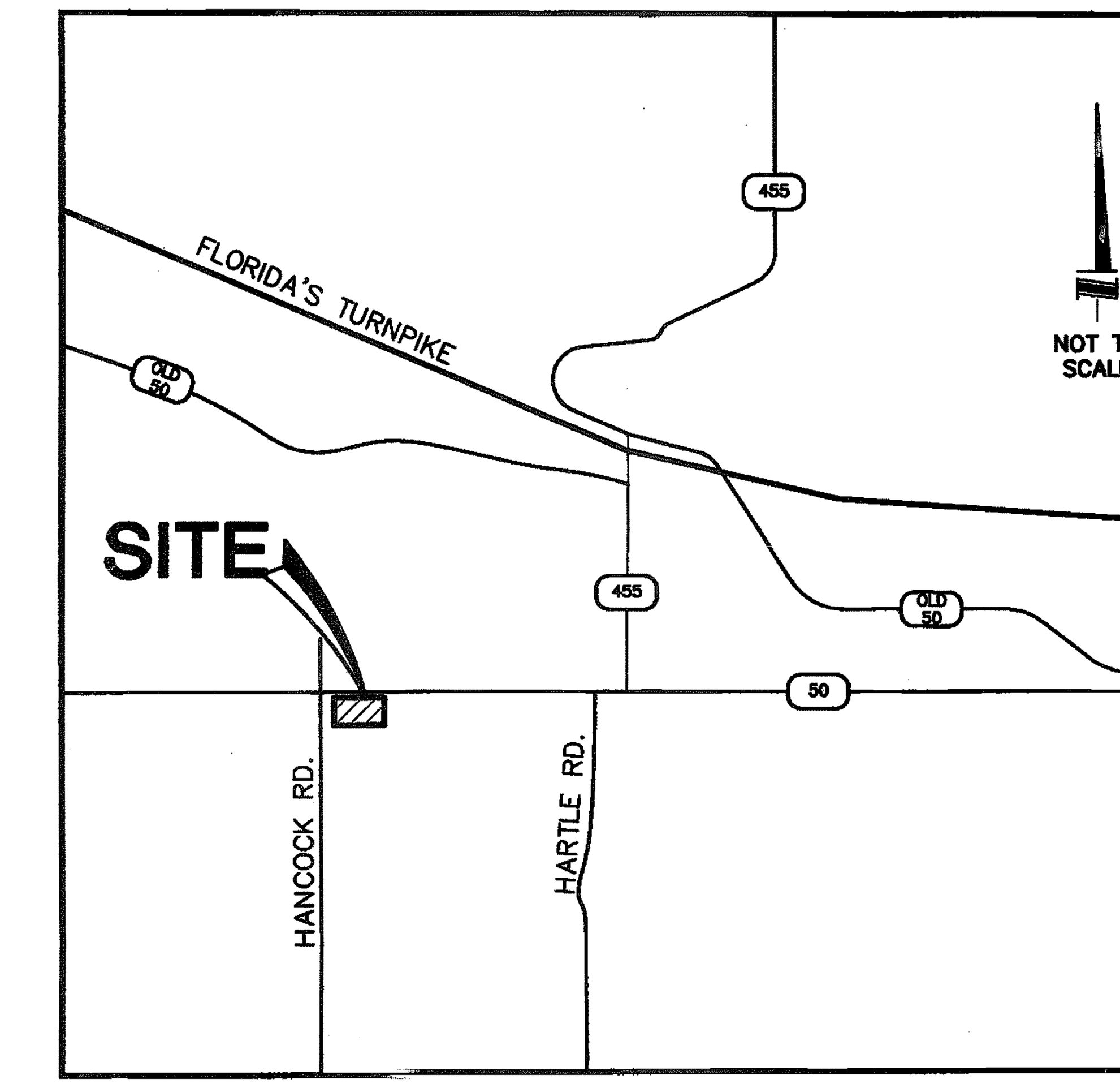
PREPARED FOR:

TRYCON ASSOCIATES
951 MARKET PROMENADE AVENUE, SUITE 2015
LAKE MARY, FLORIDA 32746
PH. (407) 804-8949

PREPARED BY:

KCG
KELLY, COLLINS & GENTRY, INC.
ENGINEERING • PLANNING

1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858



VICINITY MAP
N.T.S.

SHEET INDEX

UTILITIES

ELECTRIC SERVICE:
PROGRESS ENERGY
452 E. CROWN POINT ROAD
WINTER GARDEN, FL 34787
ATTN: JUAN DACOSTA
(407) 905-3310

TELEPHONE SERVICE:
SPRINT UNITED
(800) 339-1811

WATER SERVICE AND SANITARY SEWER SERVICE:
CITY OF CLERMONT
685 W. MONTROSE ST.
CLERMONT, FL 34711
(352) 394-3350

FLORIDA POWER CORP. - DISTRIBUTION
ATTEN: BRETT HUGHES
4010 CITRUS TOWER BLVD.
CLERMONT, FL 34711
(407) 938-6652

MCI TELECOMMUNTCATIONS
2250 LAKESIDE BLVD.
DEPT 42856-642
RICHARDSON, TX 75082

LAKE APOPKA NATURAL GAS DISTRICT
ATTEN. RICK GULLETT
1320 S. VINELAND RD.
WINTER GARDEN , FL. 34777-1275
(407) 656-2734

BROADWING COMMUNICATIONS:
ATTEN. JERRY HAMMES
5915 S. RIO GRANDE AVE.
ORLANDO , FL. 32809
(407) 859-7661

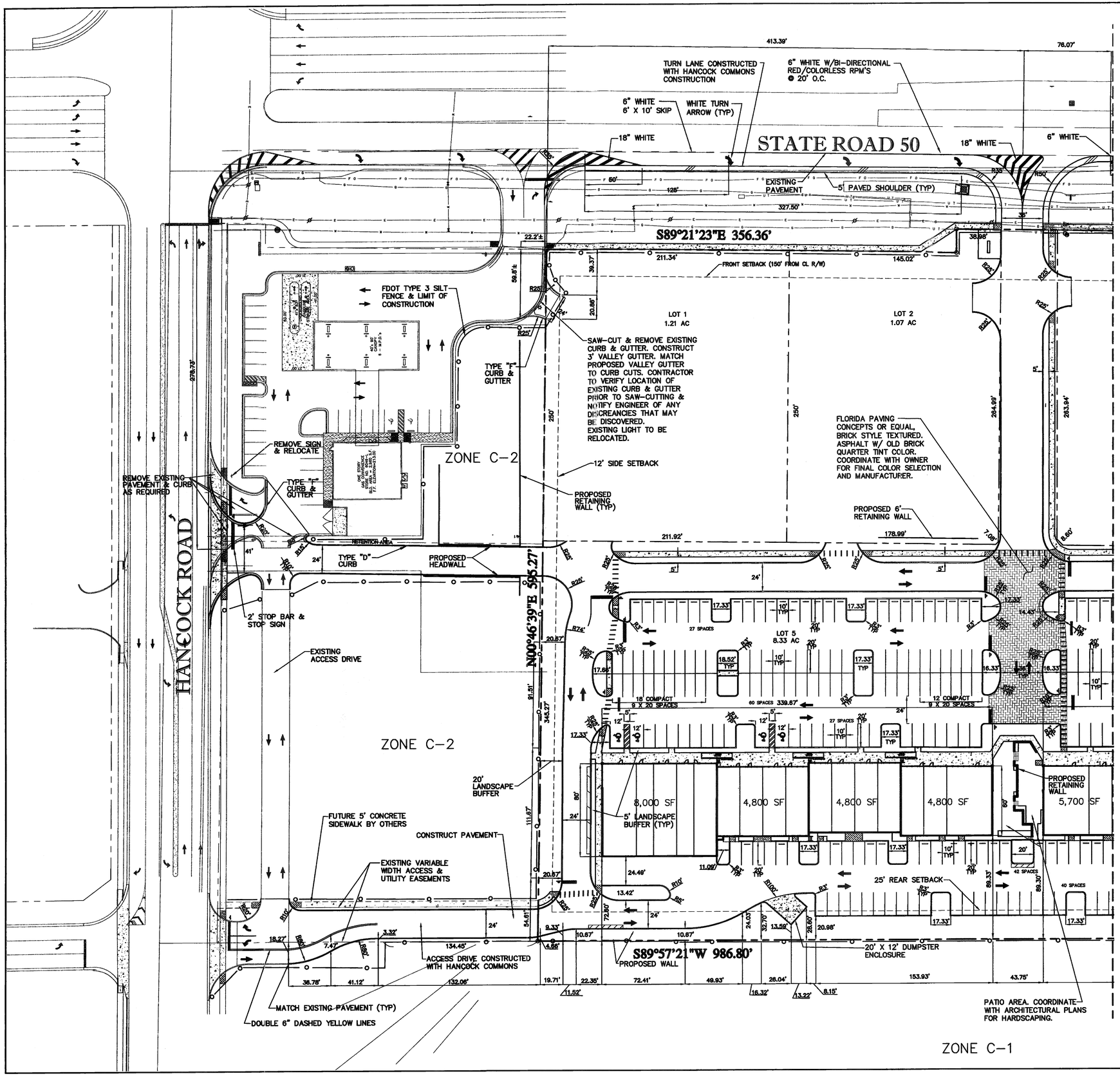
GAS:
LAKE APOPKA NATURAL GAS DISTRICT
1320 VINELAND RD.
WINTER GARDEN, FL. 34777-1275
(407) 656-2734
(352) 394-3350

SOUTHERN BELL OR BELL SOUTH
ATTEN. KEN DORTONA
6026 NW 1ST PL.
GAINSEVILLE, FL. 32608
(352) 331-9199

SHAW COMMINICATIONS
ATTEN. JACK COOPER
30432 S.R. 54
WESLEY CHAPEL , FL. 33543
(813) 862-0500

CERTIFICATE OF AUTHORIZATION NUMBER 00007350
AUG 14 2006
SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

HANCOCK COMMONS



NOTES:

CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES FOUND BETWEEN THESE PLANS AND/OR FIELD CONDITIONS PRIOR TO CONSTRUCTION.

ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS CONTAINED HEREIN AND/OR OTHERWISE REQUIRED BY APPLICABLE FEDERAL, STATE AND LOCAL CODES, ORDINANCES, AND REGULATIONS. IN THE EVENT OF A CONFLICT BETWEEN THE REQUIREMENTS, THE MOST STRINGENT SHALL APPLY AS DETERMINED BY THE OWNER'S REPRESENTATIVE.

TOPOGRAPHIC INFORMATION, BOUNDARY INFORMATION AND VERTICAL CONTROL PROVIDED WITHIN THESE CONSTRUCTION PLANS IS TAKEN FROM A SURVEY BY LEADING EDGE AND CAN BE OBTAINED FROM THE OWNER.

GEOTECHNICAL INVESTIGATION REPORT IS AVAILABLE FROM THE OWNER.

CONTRACTOR SHALL COMPLY WITH ALL PERMIT CONDITIONS DURING CONSTRUCTION.
DIMENSIONS SHOWN ARE MEASURED TO/FROM THE FACE OF CURB, PROPERTY LINE, PROPERTY CORNER, OR FACE OF BUILDING.

CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE DIMENSION BASELINE AND OFFSETS PROVIDED ON THIS SHEET. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO INSURE ADEQUATE POSITIONING BOTH HORIZONTAL AND VERTICAL, INCLUDING MINIMUM BUILDING SETBACKS, PRIOR TO THE INSTALLATION OF ANY IMPROVEMENTS.

CERTIFIED SURVEYORS AS-BUILT PLANS AND CERTIFIED MATERIALS TESTING RESULTS SHALL BE SUPPLIED BY CONTRACTOR UPON REQUEST.

ALL DISTURBED AREAS WITHIN CITY R/W ARE TO BE SODDED PER CITY STANDARDS.

ALL TRAFFIC ARROWS, STOP BARS AND STRIPING TO BE THERMOPLASTIC. MATERIAL CERTIFICATION SHALL BE REQUIRED FOR ALL PAINT AND THERMOPLASTIC STATING SAID MATERIALS DO NOT CONTAIN LEAD.

PRECONSTRUCTION MEETING WITH CITY OF CLERMONT IS REQUIRED.

DUMPSTER TO BE CONSTRUCTED PER CITY OF CLERMONT STANDARD.

CLEAN DIRT FROM ROADWAYS DAILY.

EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.

COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS IN ADVANCE OF BEGINNING WORK IN A GIVE AREA(S).

FDOT NOTES:

1. ALL CONSTRUCTION MATERIALS AND METHODS, SHALL MEET THE MOST CURRENT EDITIONS OF THE DESIGN STANDARDS, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE UTILITY ACCOMMODATION MANUAL.
2. ALL DISTURBED AREAS WITHIN THE DEPARTMENT'S RIGHT OF WAY SHALL BE GRADED AND SODDED WITH ARGENTINE BAHIA SOD.
3. ALL STRIPING WITHIN THE DEPARTMENT'S RIGHT OF WAY SHALL BE LEAD-FREE THERMOPLASTIC.
4. ALL MAINTENANCE OF TRAFFIC SHALL ADHERE TO THE REQUIREMENTS OF THE DESIGN STANDARDS 600 INDEXES.
5. RPM'S SHALL BE PLACED AS PER FDOT INDEX #17352

67971-2

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. STR.

CERT. OF AUTHORIZATION # 7350

SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44077
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7856 FAX (407) 898-1468

6		
5		
4		
3		
2		
1	DATE	REVISION

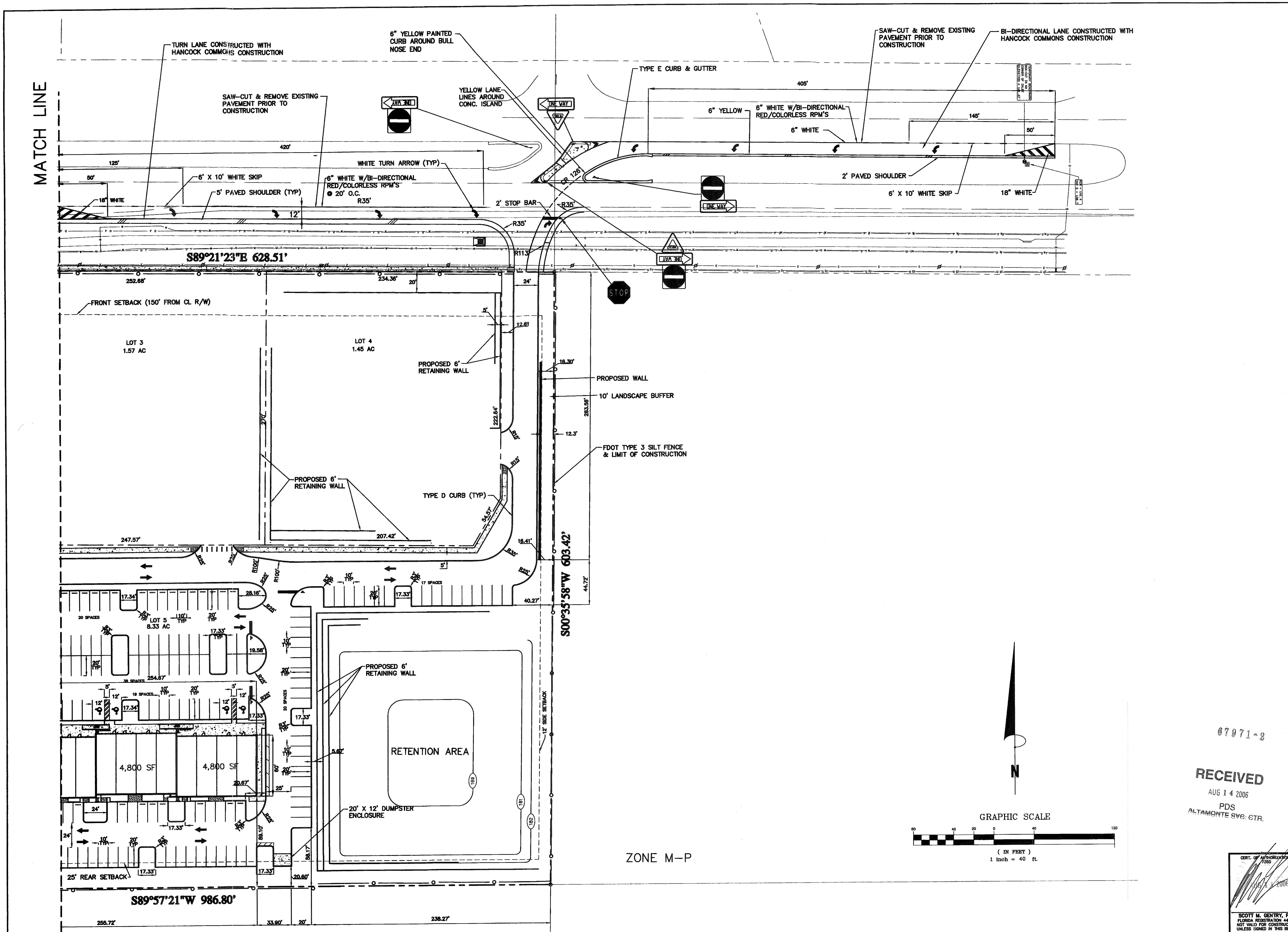
PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

SITE DIMENSION PLAN

DRAWN: JRB
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET
C-2


MATCH LINE
TURN LANE CONSTRUCTED WITH HANCOCK COMMONS CONSTRUCTION
6" YELLOW PAINTED CURB AROUND BULL NOSE END
SAW-CUT & REMOVE EXISTING PAVEMENT PRIOR TO CONSTRUCTION
BI-DIRECTIONAL LANE CONSTRUCTED WITH HANCOCK COMMONS CONSTRUCTION
TYPE E CURB & GUTTER
YELLOW LANE LINES AROUND CONC. ISLAND
SAW-CUT & REMOVE EXISTING PAVEMENT PRIOR TO CONSTRUCTION
405'
6" YELLOW
6" WHITE W/BI-DIRECTIONAL RED/COLORLESS RPM'S
6" WHITE
145'
50'
420'
125'
WHITE TURN ARROW (TYP)
6' X 10' WHITE SKIP
6" WHITE W/BI-DIRECTIONAL RED/COLORLESS RPM'S @ 20' O.C.
5' PAVED SHOULDER (TYP)
18" WHITE
2' PAVED SHOULDER
6' X 10' WHITE SKIP
18" WHITE
2' STOP BAR
R35'
12'
ONE WAY
S89°21'23"E 628.51'
252.68'
234.36'
20'
24'
R113'
STOP
FRONT SETBACK (150' FROM CL R/W)
LOT 3
1.57 AC
LOT 4
1.45 AC
PROPOSED 6' RETAINING WALL
12.61
16.30'
PROPOSED WALL
10' LANDSCAPE BUFFER
283.56'
222.64'
270'
12.3'
FDOT TYPE 3 SILT FENCE & LIMIT OF CONSTRUCTION
PROPOSED 6' RETAINING WALL
TYPE D CURB (TYP)
54.57'
247.57'
207.42'
16.41'
S00°35'58"W 603.42'
44.72'
40.27'
R100'
17 SPACES
17.33'
17.34'
28.16'
20 SPACES
LOT 5
8.33 AC
17.33'
19.58'
254.67'
19 SPACES
20 SPACES
17.34'
17.33'
PROPOSED 6' RETAINING WALL
RETENTION AREA
12' SIDE SETBACK
4,800 SF
4,800 SF
20.67'
5.67'
24'
17.33'
88.10'
20' X 12' DUMPSTER ENCLOSURE
58.17'
25' REAR SETBACK
17.33'
17.33'
20.60'
S89°57'21"W 986.80'
255.72'
33.90'
20'
238.27'
ZONE M-P
N
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

67971-2

RECEIVED
AUG 1 4 2006
PDS
ALTAMONTE SVC. CTR.

CERT. OF AUTHORIZATION # 7350

SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

	DATE	REVISION
6		
5		
4		
3		
2		
1		

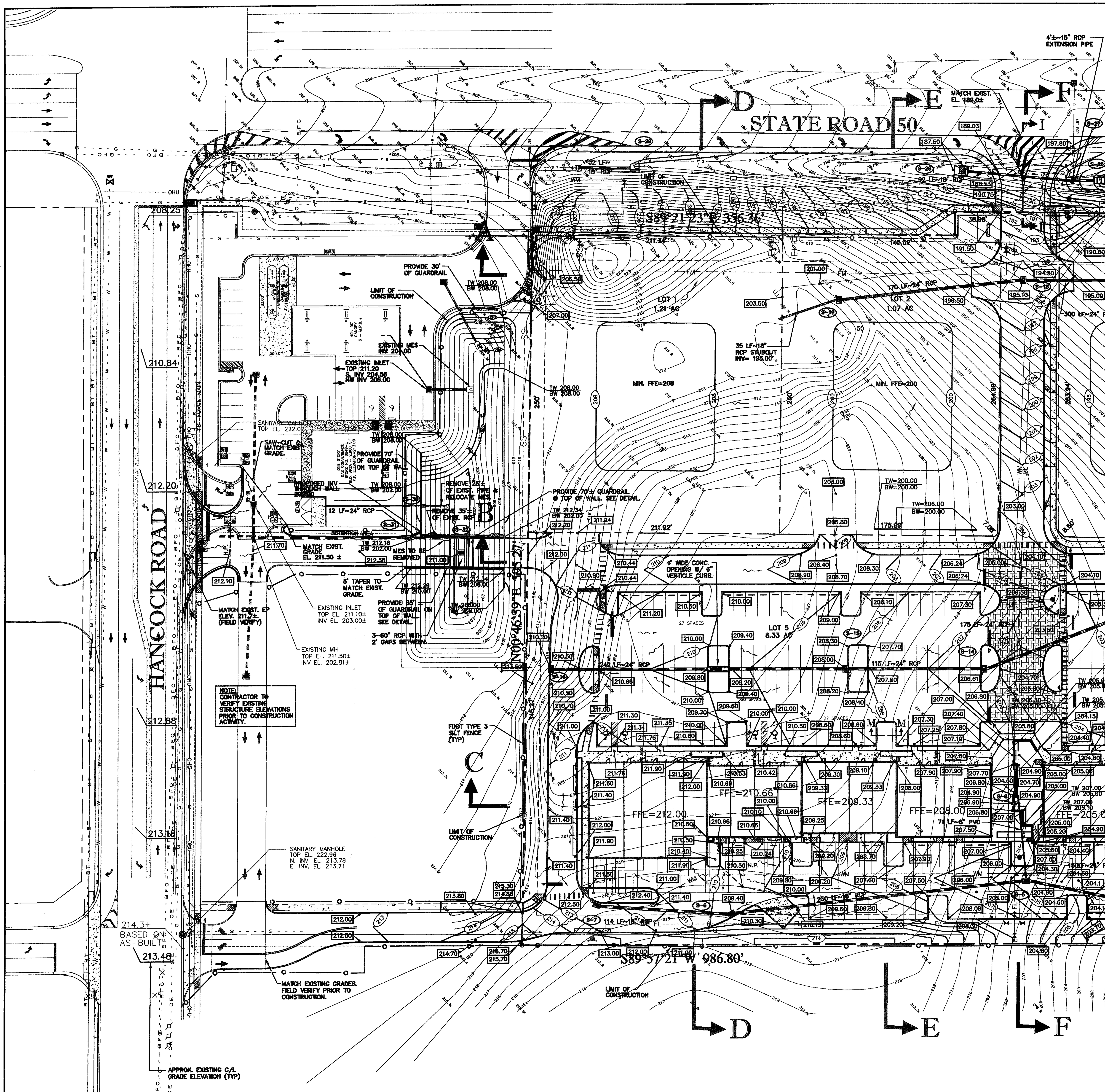
PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

SITE DIMENSION PLAN

DRAWN: JRB
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET
C-3



GRAPHIC SCALE

80 40 20 0 40 120

(IN FEET)
1 inch = 40 ft.

N

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING GRADES ON SITE BEFORE BEGINNING WORK. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY OF ANY MAJOR DIFFERENCES BETWEEN CONTRACTOR'S DATA AND DRAWINGS.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING STORMWATER COLLECTION SYSTEMS FROM DAMAGE BY SEDIMENT OR OTHER CONSTRUCTION RELATED CAUSES.
3. SIZES, LOCATION AND INVERT ELEVATIONS OF EXISTING PIPE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. EROSION CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREAS BY QUICKLY STABILIZING DISTURBED AREAS TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING SOD, HAY BALES, AND OTHER MEANS ACCEPTABLE TO OWNER, ENGINEER AND REGULATORY AGENCIES.
5. ALL STORM DRAINAGE INLETS AND PIPES SHALL BE PROTECTED FROM SILT, SAND AND DEBRIS DURING CONSTRUCTION. ANY ACCUMULATION OF DEBRIS WITHIN THE STORM DRAINAGE PIPE SYSTEM SHALL BE REMOVED.
6. PROVIDE HAY BALES IN FRONT OF ALL DRAINAGE CURB INLETS. MAINTAIN THESE MEASURES DAILY.
7. SILT FENCE SHALL BE IN-PLACE AS SHOWN PRIOR TO CONSTRUCTION. PLEASE SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EROSION CONTROL
8. EXCESS EXCAVATED UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR.
9. DEWATERING, IF REQUIRED, DURING CONSTRUCTION SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
10. ALL DISTURBED AREAS TO BE SODDED EXCEPT AS SHOWN ON PLAN. ALL SOD IN R/W TO BE ARGENTINE BAHIA.
11. GRADING SHOWN ON THESE PLANS IS PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.
12. CONTOURS ON PARKING AREAS ARE SHOWN TO DEMONSTRATE INTENT ONLY. THE PARKING FACILITIES TO BE CONSTRUCTED USING SPOT ELEVATIONS SHOWN.
13. CONTRACTOR TO COORDINATE WITH ARCH. PLANS FOR ROOF DRAIN CONNECTION LOCATION.
14. CLEAN DIRT FROM ROADWAYS DAILY.
15. EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.
16. COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS IN ADVANCE OF BEGINNING WORK IN A GIVE AREA(S).

STORM SEWER SCHEDULE

STRUCTURE TO HAVE TRAFFIC BEARING GRATE

Structure	Description
S-1	TYPE "C" INLET TOP ELEV. 171.00 SLOT ELEV. N & S 169.00 INV. 167.50 BOTTOM ELEV. 165.50
S-2	TYPE "C" INLET TOP ELEV. 199.00 INV. 191.00
S-3	TYPE "C" INLET TOP ELEV. 198.20 INV. 192.00
S-4	TYPE "C" INLET TOP ELEV. 200.00 INV. 193.60
S-5	TYPE "C" INLET TOP ELEV. 204.30 INV. 197.80
S-6	TYPE "C" INLET TOP ELEV. 209.90 INV. 200.78
S-7	TYPE "C" INLET TOP ELEV. 212.40 INV. 204.90
S-8	YARD DRAIN TOP ELEV. 204.50 INV. 198.50
S-9	TYPE "C" INLET TOP ELEV. 171.00 SLOT ELEV. N & S 169.00 INV. 167.50 BOTTOM ELEV. 165.50
S-10	TYPE "C" INLET TOP ELEV. 185.60 INV. 171.00
S-11	TYPE "C" INLET TOP ELEV. 195.70 INV. 180.00
S-12	TYPE "C" INLET TOP ELEV. 199.00 INV. 192.00
S-13	TYPE "C" INLET TOP ELEV. 200.50 INV. 194.00
S-14	TYPE "C" INLET TOP ELEV. 206.61 INV. 200.10
S-15	TYPE "C" INLET TOP ELEV. 208.00 INV. 201.50
S-16	TYPE "C" INLET TOP ELEV. 209.60 INV. 203.00
S-17	TYPE "C" INLET TOP ELEV. 187.75 INV. 182.00
S-18	TYPE "C" INLET TOP ELEV. 195.10 INV. 188.60
S-19	TYPE "C" INLET TOP ELEV. 201.00 INV. 194.50
S-20	TYPE "C" INLET TOP ELEV. 179.76 INV. 172.00
S-21	OUTFALL STRUCTURE TYPE "C" INLET TOP ELEV. 178.50 INV. 172.55
S-22	5'X8' CONCRETE FLUME W/ DISSIPATOR INV. 157.50 (MATCH EXISTING)
S-23	TYPE "B" INLET DITCH BOTTOM TOP ELEV. 163.00 INV. 158.50
S-24	MES INV. 159.00
S-25	EXIST. MES TO BE REMOVED. REPLACE WITH MANHOLE TOP ELEV. MATCH PVMT. 163.0± INV. 159.28± (MATCH EXIST. PIPE)
S-26	5'X8' CONCRETE FLUME W/ DISSIPATOR INV. 182.00 (MATCH EXISTING)
S-27	MANHOLE TOP ELEV. 185.50 INV. 182.12± (MATCH EXIST. PIPE)
S-28	TYPE "B" DITCH BOTTOM INLET TOP ELEV. 187.50 INV. 183.00
S-29	MES INV. 200.00
S-30	PROPOSED MES INV. 202.00
S-31	PROPOSED CURB INLET TYPE J BOTTOM W/ TYPE 5 TOP TOP EL. 212.24 INV. MATCH EXIST. PIPE INV. 202.16±
S-32	TYPE "D" INLET TOP 211.00 INV. 202.00

LEGEND

Symbol	Description
—o—o	SILT FENCE & LIMIT OF CONSTRUCTION
134.00	PROPOSED SPOT ELEVATION AT EP AND HARDSCAPES UNLESS STATED OTHERWISE
S-1	STORM STRUCTURE IDENTIFICATION
+ 92.50	EXISTING SPOT ELEV.
— 165 —	PROPOSED CONTOUR ELEVATION
~	STORMWATER SURFACE FLOW
C.O.	CLEAN OUT
RDC	ROOF DRAIN CONNECTION

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.
67971-8

CERT. OF AUTHORIZATION # 7350

SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

REVISION	DATE
6	
5	
4	
3	
2	
1	

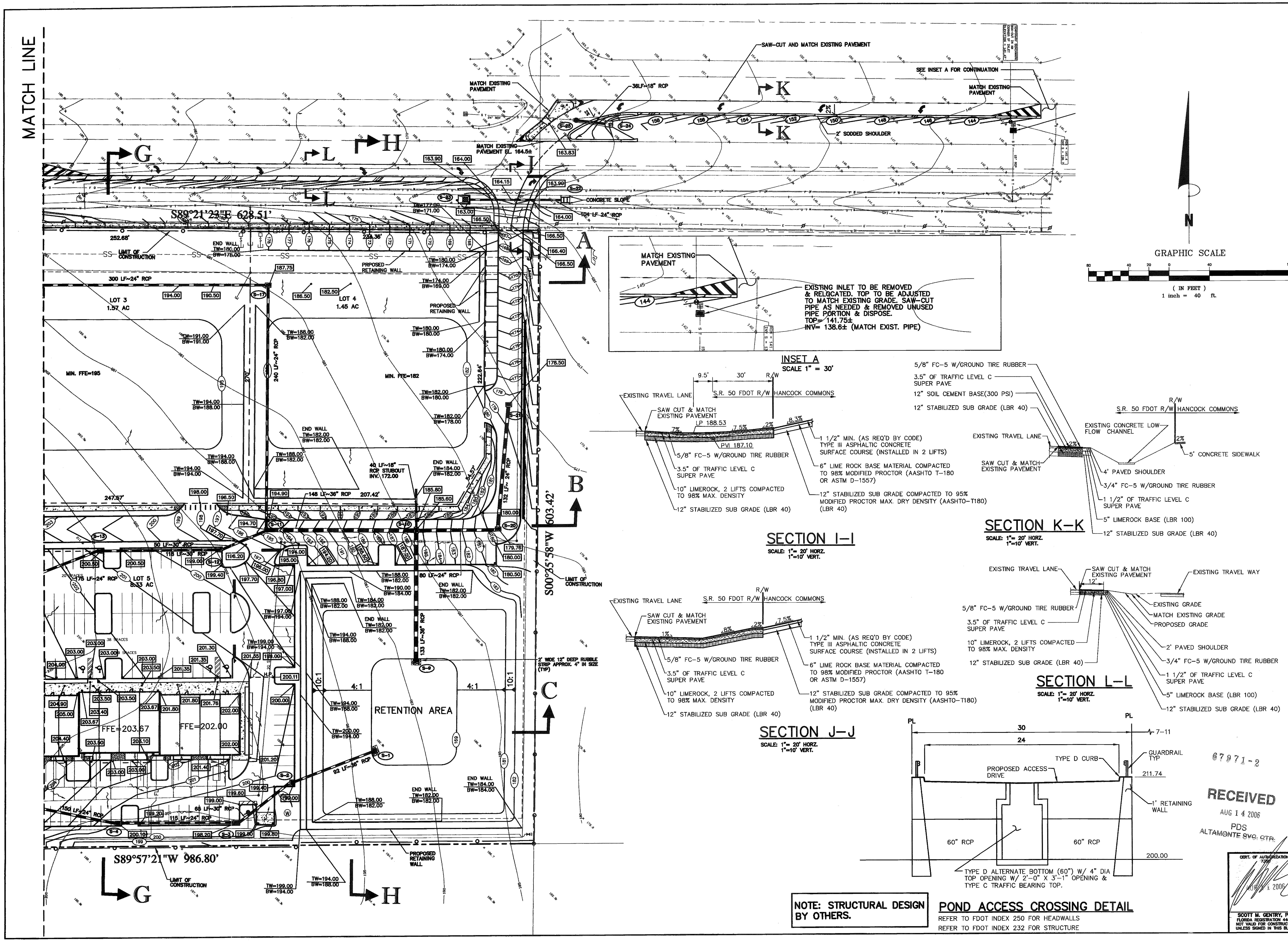
PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

PAVING, GRADING & DRAINAGE PLAN

DRAWN: JRB
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET C-4



CERT. OF AUTHORIZATION 7350
SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804 (407) 898-7858 FAX (407) 898-1488

REVISION	DATE
6	
5	
4	
3	
2	
1	

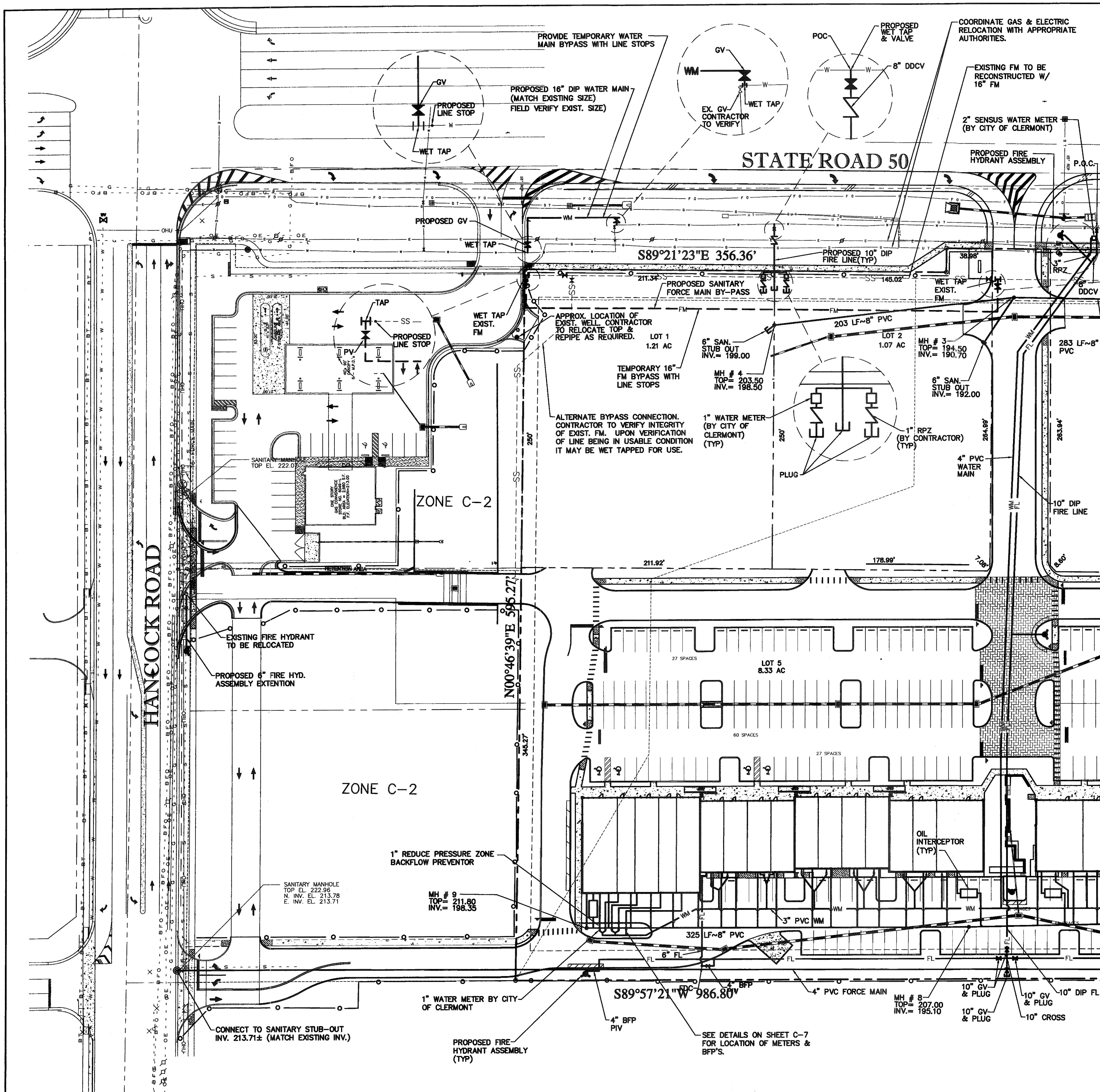
PREPARED FOR:
TRYCON ASSOCIATES

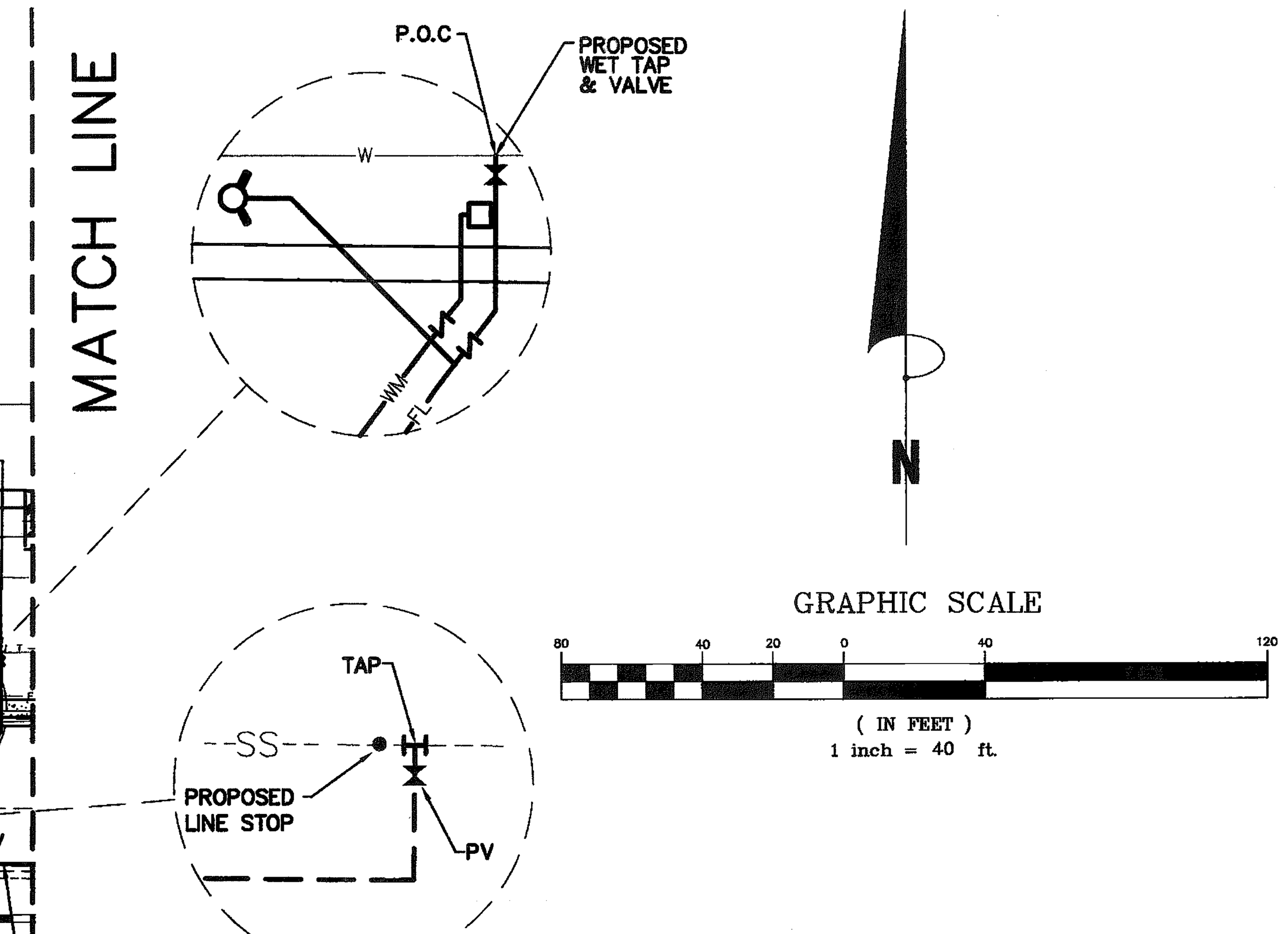
HANCOCK COMMONS CLERMONT, FLORIDA

PAVING, GRADING & DRAINAGE PLAN

DRAWN: JBB
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET C-5





NOTES:

1. WATER AND SEWER LINES SHALL EXTEND TO 5' FROM EXTERIOR WALL OF BUILDING, AND SHALL BE MARKED, CAPPED AND BURIED.
2. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTION(S) TO COMPLETE THE ON-SITE WASTEWATER AND WATER SYSTEMS.
3. WATER AND SEWER INSTALLATIONS ARE SHOWN IN OUTLINE FORM. CONTRACTOR SHALL INSTALL ALL FITTINGS AND INCIDENTALS NECESSARY TO COMPLETE THE FACILITY.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND VERIFYING LOCATION OF THEIR FACILITIES PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL USE SPECIAL CARE IN WORKING AROUND AND NEAR ALL EXISTING UTILITIES THAT ARE ENCOUNTERED DURING CONSTRUCTION, PROTECTING THEM WHERE NECESSARY SO THAT THEY WILL GIVE UNINTERRUPTED SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNERS FOR ALL DAMAGES TO SAID UTILITIES. DURING THE COURSE OF CONSTRUCTION BY THE CONTRACTOR, WHEN IT IS NECESSARY TO HAVE UTILITIES RELOCATED OR ADJUSTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING AND COORDINATING THIS WORK WITH THE UTILITY COMPANIES.
5. MAINTAIN A MINIMUM OF 3 FEET OF COVER OVER ALL NEW UTILITY MAINS.
6. CONTRACTOR TO CALL SUNSHINE FOR UTILITY LOCATIONS.
7. ALL IRRIGATION PIPING TO BE PURPLE.
8. UTILITIES WILL BE PRIVATELY OWNED AND OPERATED.
9. THE CONTRACTOR SHALL NOTIFY THE CITY OF CLERMONT PUBLIC UTILITIES DEPARTMENT 48 HOURS PRIOR TO ANY UTILITIES CONSTRUCTION. (407)836-7274.
10. LOCATION OF ALL EXISTING UTILITIES TO BE FIELD VERIFIED.
11. WATER METERS PROVIDED BY THE CITY OF CLERMONT UTILITIES.
12. HYDRANTS & FDC AS SHOWN ARE FOR CLARITY. PROVIDE 7'-6" CLEAR AROUND FDC. PROVIDE 7'-6" IN FRONT OF AND TO SIDES OF FIRE HYDRANTS WITH 4' MIN. CLEAR TO REAR OF HYDRANT.
13. CLEAN DIRT FROM ROADWAYS DAILY.
14. EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.
15. COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS IN ADVANCE OF BEGINNING WORK IN A GIVE AREA(S).

ESTIMATED WATER USAGE = 5700 GPD
RETAIL= 3600 GPD @ 144 FU'S X 25= 3600 GPD
RESTAURANTS= 2100 GPD @ 84 FU'S X 25= 2100 GPD
3600 GPD + 2100 GPD = 5700 GPD

ESTIMATED SEWER USAGE = 6000 GPD
60,000 SF BLDG. AREA X .1= 6,000 GPD
6,000 GPD/24= 250 GPH

WATER/SEWER/UTILITY RELOCATION CONSTRUCTION SEQUENCE:

WATER:

1. CONSTRUCT PROPOSED WM AS SHOWN
2. WET TAP EXISTING WM AS SHOWN
3. TAP VALVE TO EAST SIDE OF WEST TAP
4. FDEP CLEARANCE PROCESS
5. AFTER CLEARANCE, OPEN VALVES
6. CLOSE VALVES ON WM TO BE REMOVED & REMOVE WM

FORCE MAIN:

1. WET TAP EXISTING SANITARY SEWER & CONSTRUCT PIPE
2. INSTALL LINE STOPS
3. CLOSE VALVES ON EXISTING FORCE MAIN BEING RECONSTRUCTED
4. REMOVE FORCE MAIN BEING RECONSTRUCTED & CONSTRUCT NEW FM
5. FDEP CLEARANCE PROCESS
6. OPEN VALVES ON RECONSTRUCTED SANITARY LINE
7. CLOSE VALVES ON BYPASS LINE & REMOVE PIPE AND PROPERLY ABANDONE VALVES

UTILITIES:

1. COORDINATE WITH POWER COMPANY FOR ANY POLE ADJUSTMENTS
2. RELOCATE GAS & ELECTRIC TO MAINTAIN 3' MIN. COVER FROM PROPOSED GRADE
3. CUT GRADE TO PROPOSED GRADE

67971-2

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

CERT. OF AUTHORIZATION # 7350
SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

REVISION | DATE

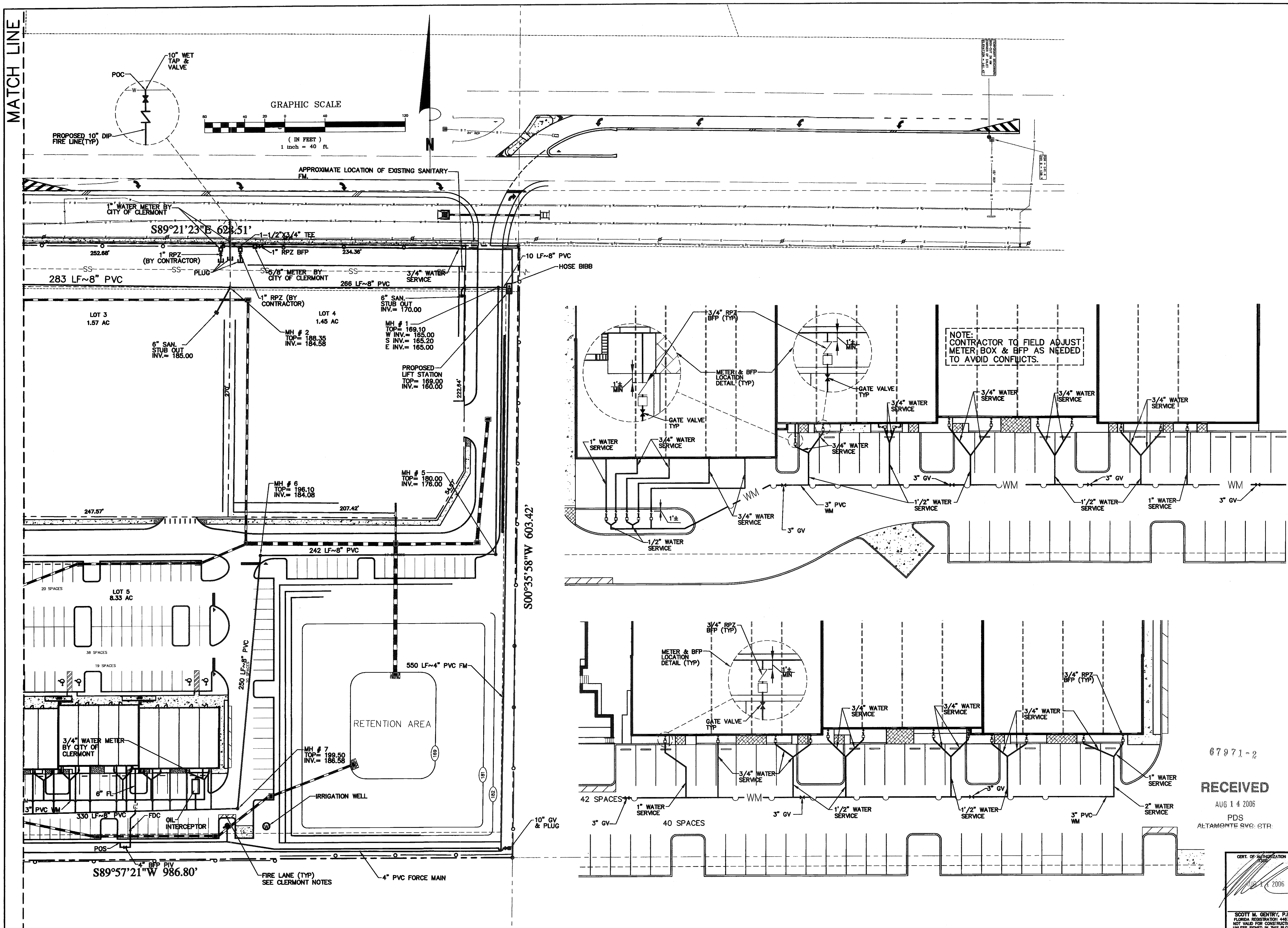
PREPARED FOR: TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

UTILITY PLAN

DRAWN: JRB
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET C-6



MATCH LINE
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
N
10" WET TAP & VALVE
POC
PROPOSED 10" DIP FIRE LINE(TYP)
APPROXIMATE LOCATION OF EXISTING SANITARY FM.
1" WATER METER BY CITY OF CLERMONT
S89°21'23"E 628.51'
1-1/2"X3/4" TEE
1" RPZ BFP
1" RPZ (BY CONTRACTOR)
PLUG
5/8" METER BY CITY OF CLERMONT
3/4" WATER SERVICE
10 LF~8" PVC
HOSE BIBB
283 LF~8" PVC
266 LF~8" PVC
1" RPZ (BY CONTRACTOR)
6" SAN. STUB OUT INV.= 170.00
LOT 3 1.57 AC
LOT 4 1.45 AC
6" SAN. STUB OUT INV.= 185.00
MH # 2 TOP= 188.35 INV.= 184.58
MH # 1 TOP= 169.10 W INV.= 165.00 S INV.= 165.20 E INV.= 165.00
PROPOSED LIFT STATION TOP= 169.00 INV.= 160.00
MH # 5 TOP= 180.00 INV.= 176.00
MH # 6 TOP= 196.10 INV.= 184.08
242 LF~8" PVC
S00°35'58"W 603.42'
LOT 5 8.33 AC
250 LF~8" PVC
550 LF~4" PVC FM
RETENTION AREA
3/4" WATER METER BY CITY OF CLERMONT
MH # 7 TOP= 199.50 INV.= 186.58
IRRIGATION WELL
6" FL
3" PVC WM
330 LF~8" PVC
FDC
OIL-INTERCEPTOR
POS
4" BFP PIV
S89°57'21"W 986.80'
FIRE LANE (TYP) SEE CLERMONT NOTES
4" PVC FORCE MAIN
10" GV & PLUG
3/4" RPZ BFP (TYP)
METER & BFP LOCATION DETAIL (TYP)
GATE VALVE TYP
NOTE: CONTRACTOR TO FIELD ADJUST METER BOX & BFP AS NEEDED TO AVOID CONFLICTS.
1" WATER SERVICE
3/4" WATER SERVICE
1/2" WATER SERVICE
1'/2" WATER SERVICE
2" WATER SERVICE
3" PVC WM
3" GV
WM
42 SPACES
40 SPACES

67971-2

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

CERT. OF AUTHORIZATION #
AUG 14 2006
SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

REVISION	DATE	
		6
		5
		4
		3
		2
		1

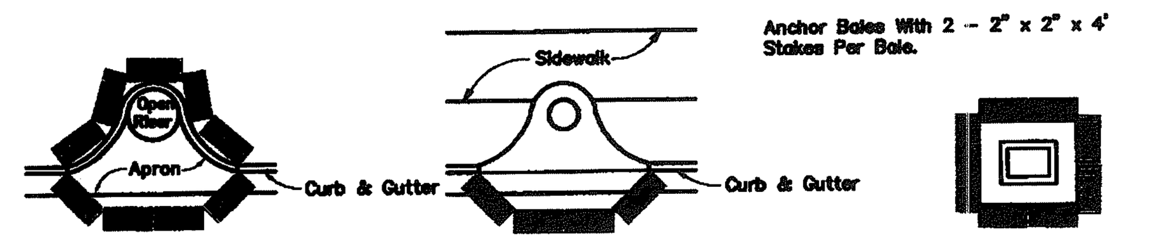
PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

UTILITY PLAN

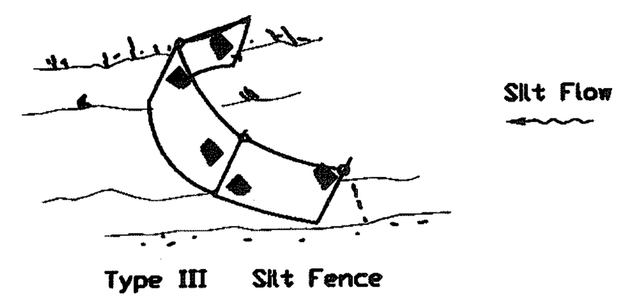
DRAWN: JRB
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET C-7



PARTIAL INLET
COMPLETED INLET
INLET IN PAVEMENT

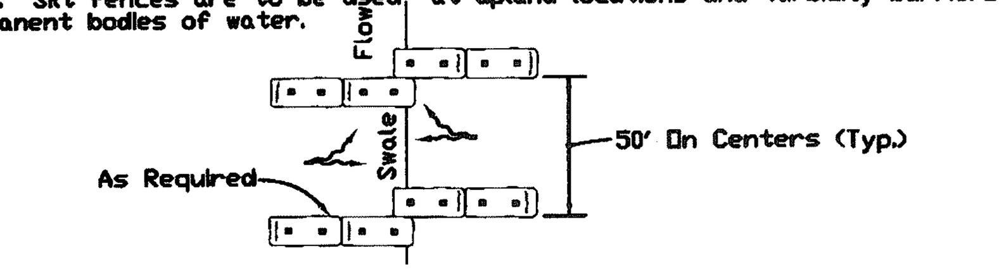
PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



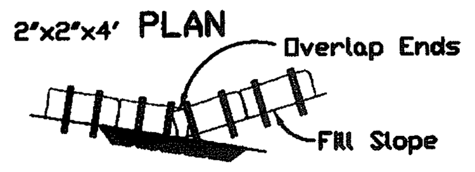
SILT FENCE APPLICATIONS

N.T.S.

Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

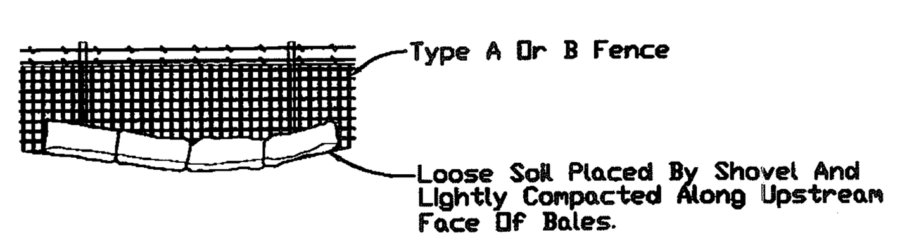


Anchor Bales With 2 - 2"x2"x4' Stakes Per Bale. PLAN



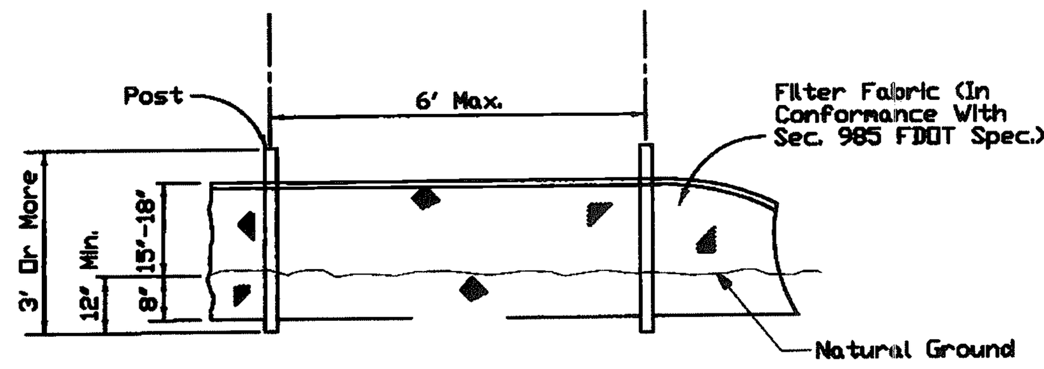
ELEVATION

TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES TOWARD THE TOE OF SLOPE

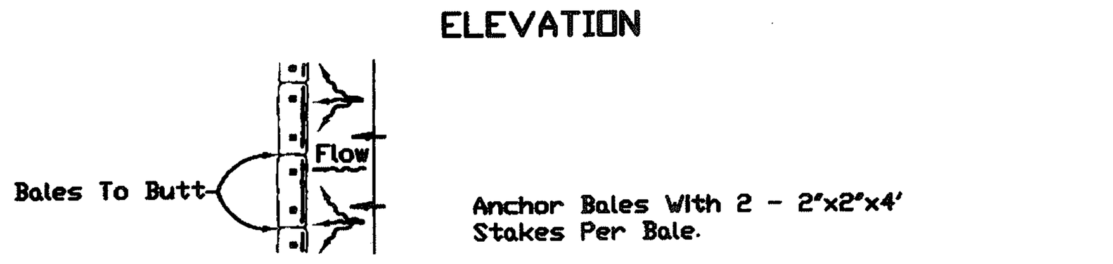


FENCE BACKED BY BALES

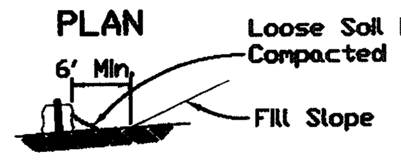
N.T.S.



ELEVATION



PLAN

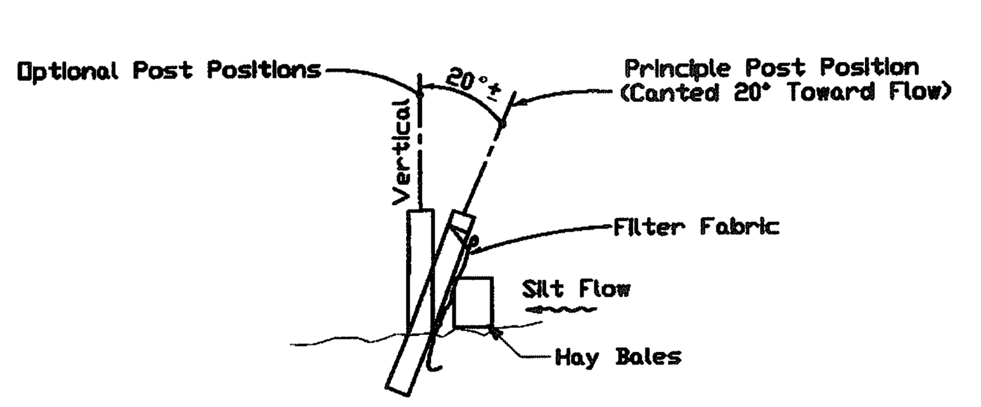


ELEVATION

TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE

BARRIERS FOR FILL SLOPES

N.T.S.



SECTION

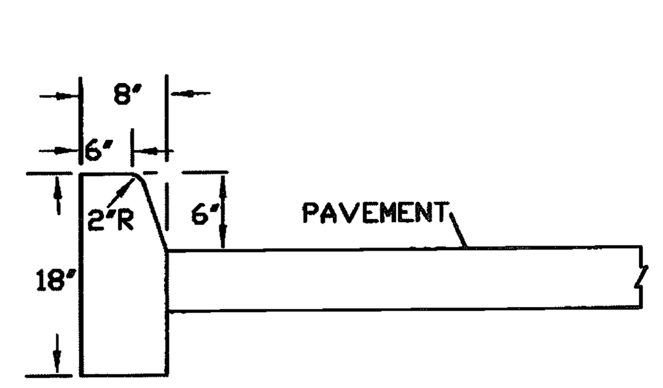
Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE III SILT FENCE

N.T.S.

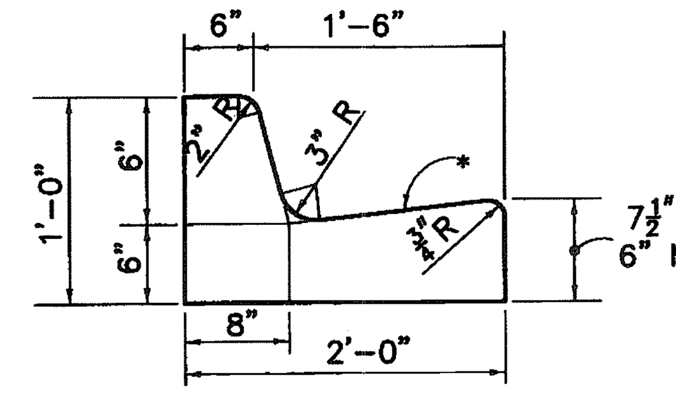
SILT FENCE DETAILS

NTS



TYPE D CURB

NTS

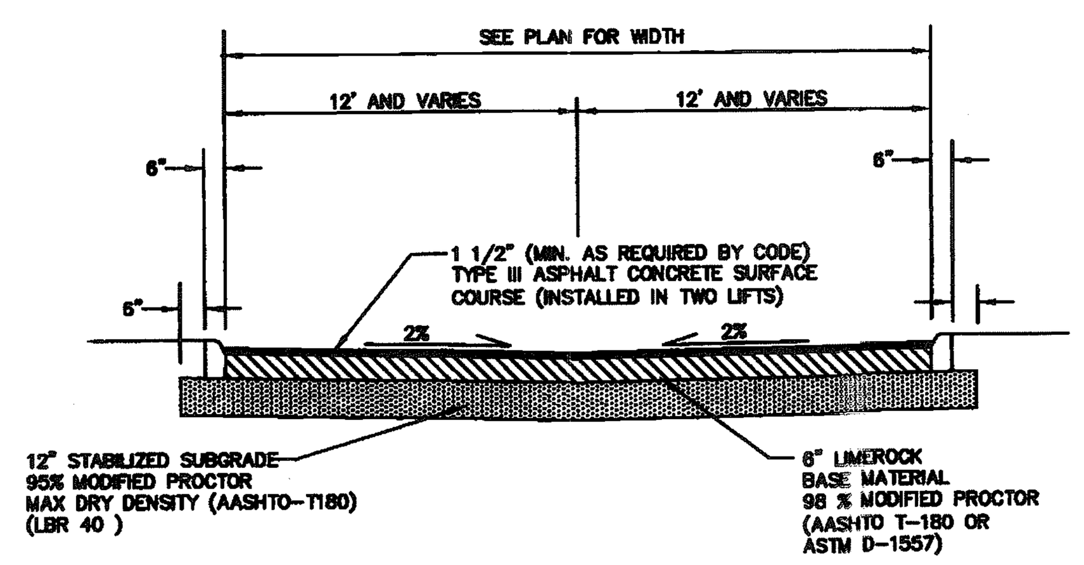


*Note: When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement the thickness of the lip shall be 6", unless otherwise shown on plans.

TYPE F

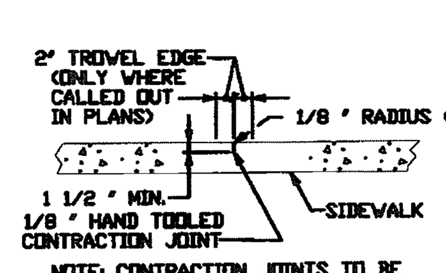
CURB & GUTTER DETAIL

NTS

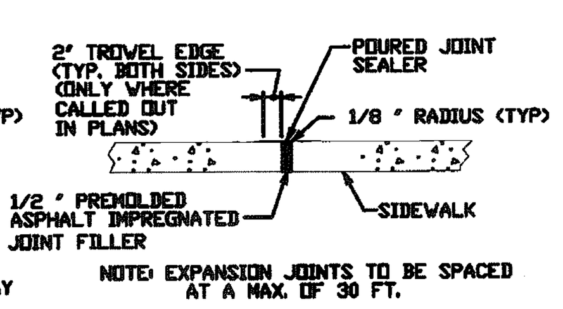


TYPICAL INTERIOR PAVEMENT SECTION

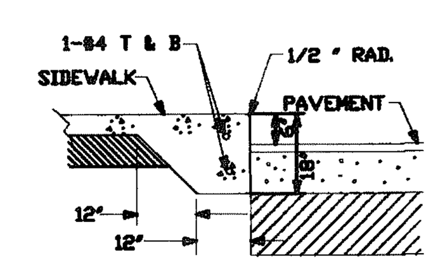
NTS



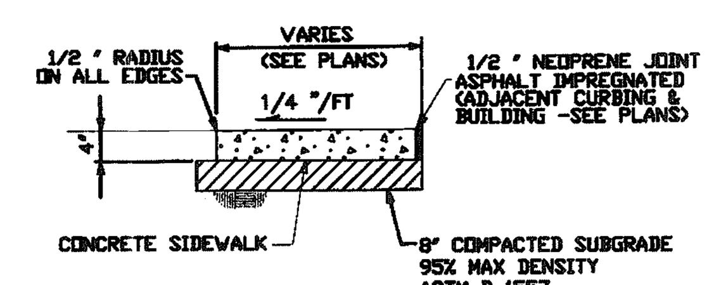
CONTRACTION JOINTS



EXPANSION JOINTS



THICKENED EDGE



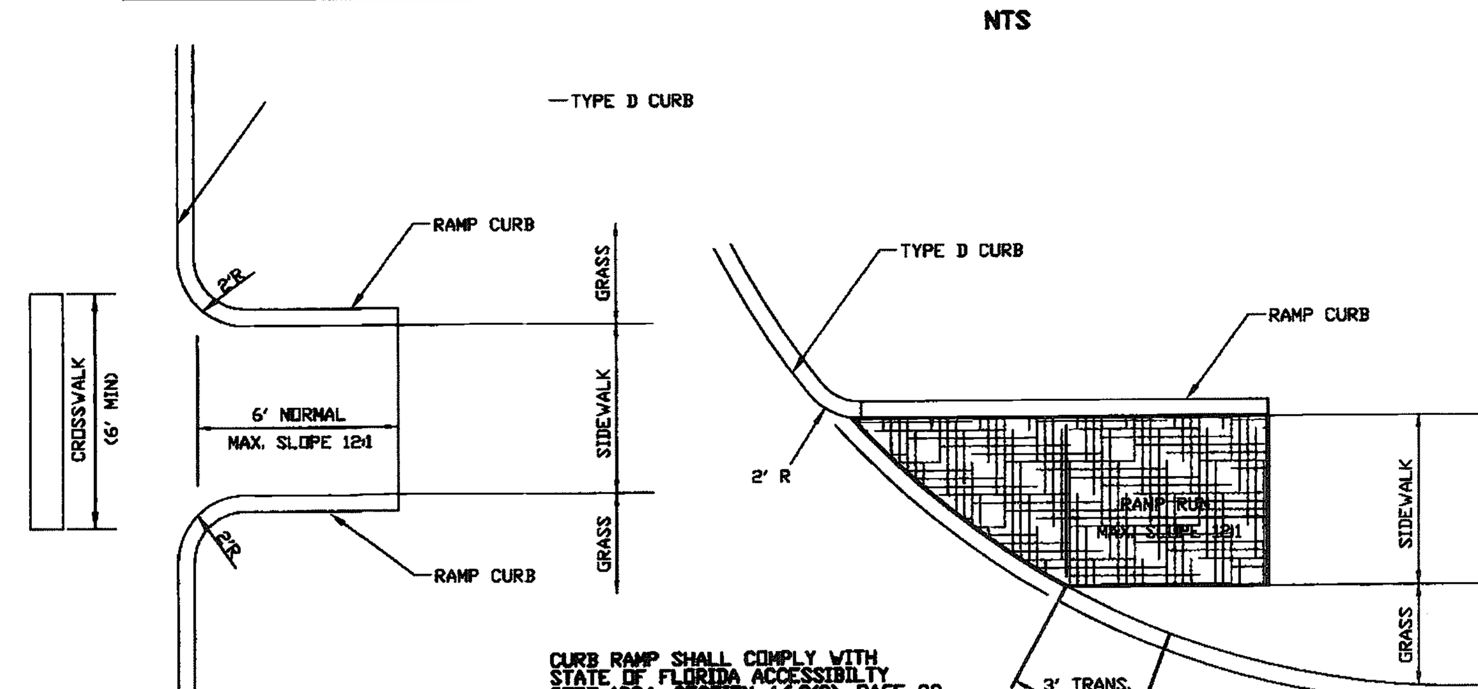
SIDEWALK

NOTE:

CONST. ADJ. TO BLDG.

SIDEWALK DETAILS

NTS



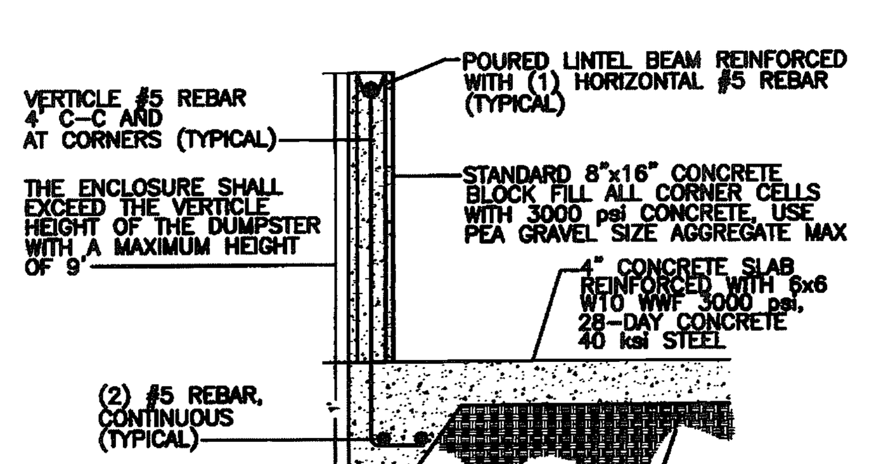
CURB RAMP SHALL COMPLY WITH STATE OF FLORIDA ACCESSIBILITY CODE 1994, SECTION 4.6.3(3), PAGE 29.

PROVIDE EXPOSED AGGREGATE CONCRETE DETECTABLE WARNING FINISH PER ADA & ANSI. CONTRACTOR TO CONFIRM RAMP SURFACE TREATMENT WITH LOCAL BUILDING OFFICIAL & ARCHITECT PLANS PRIOR TO CONSTRUCTION.

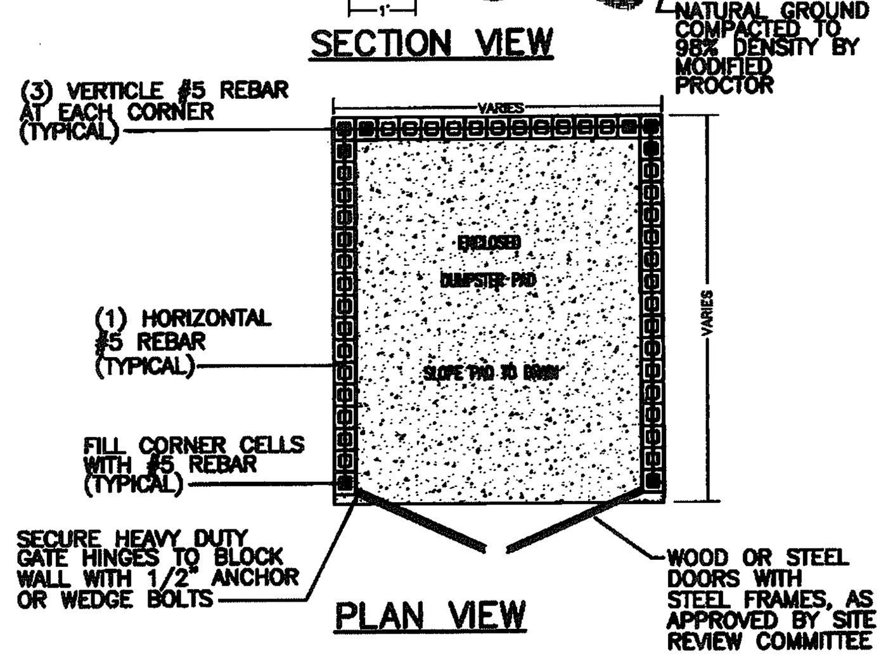
CURB CUT RAMP

SEE FDOT INDEX 304

NTS



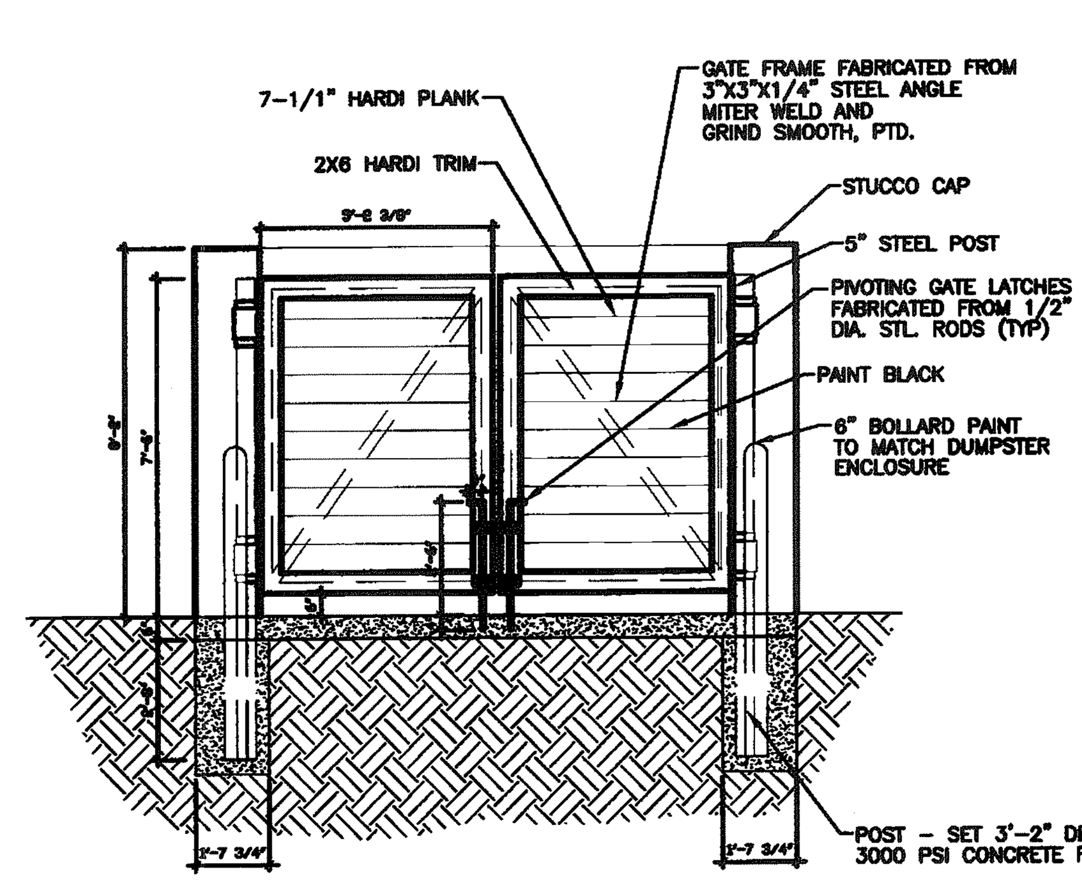
SECTION VIEW



PLAN VIEW

DUMPSTER DETAIL

N.T.S.

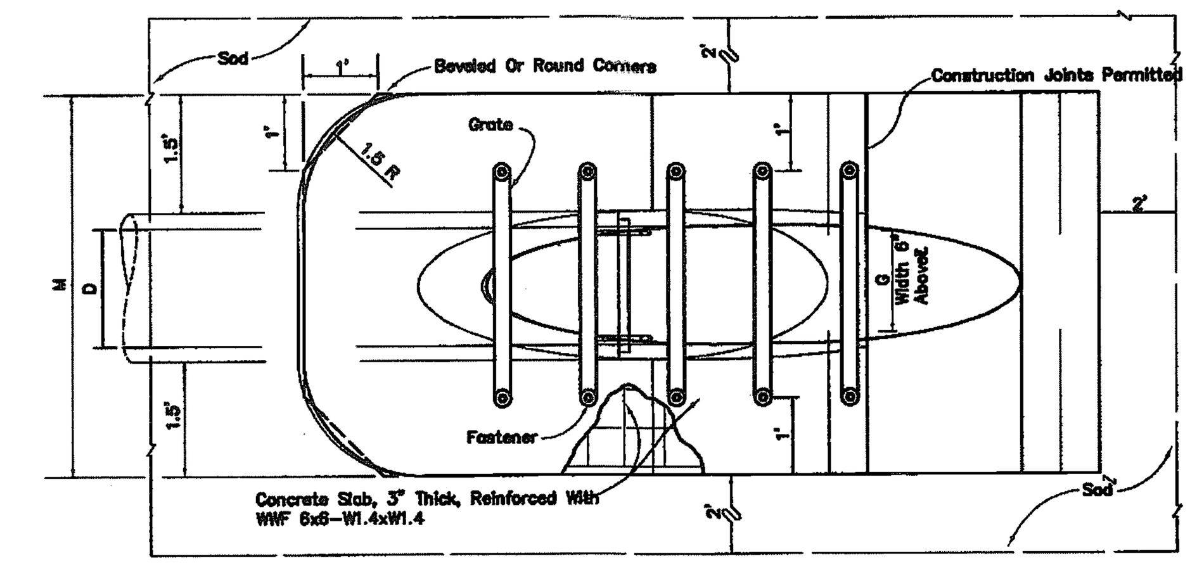


GATE ELEVATION

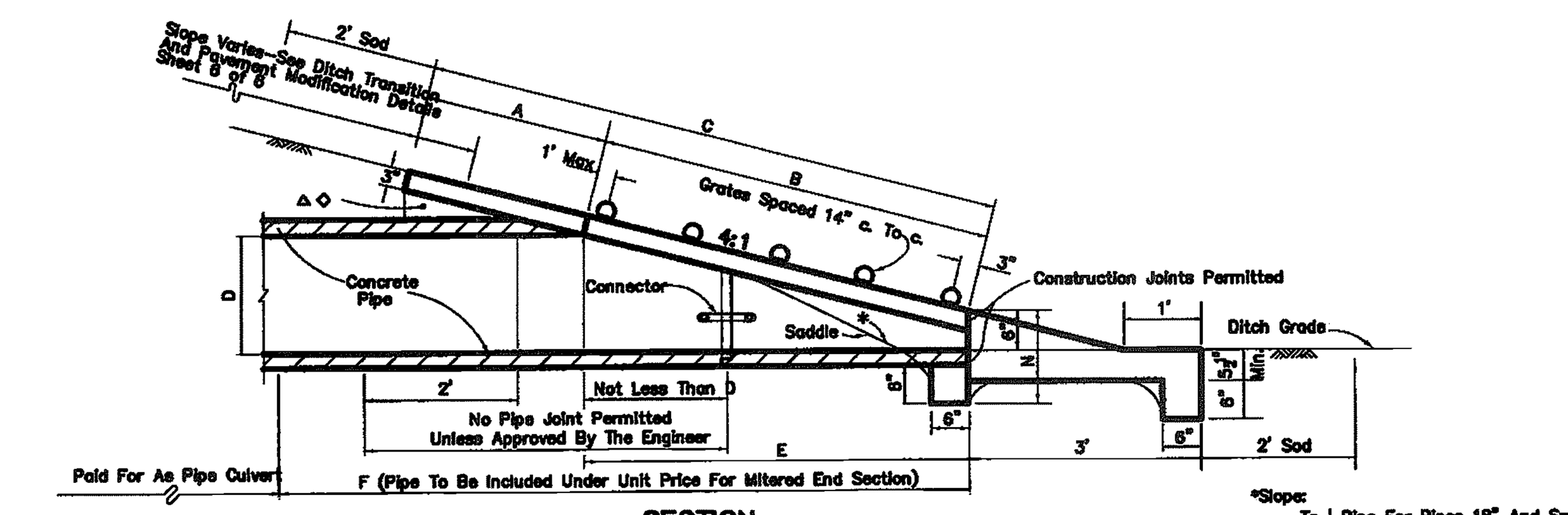
NTS

DIMENSIONS & QUANTITIES																						
								M					GRATE SIZES		CONCRETE (Cu. Yds.)				SODDING (Sq. Yds.)			
D	X	A	B	C	E	F	G	Single Pipe	Double Pipe	Triple Pipe	Quad Pipe	N	Standard Weight Pipe	Extra Strong Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad Pipe
15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	7.21'	9.79'	12.37'	1.19'			0.76	1.16	1.54	1.94	8	10	11	12
18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'			0.85	1.28	1.71	2.17	9	10	12	13
24"	3'-5"	2.53'	7.18'△	9.71'	7.03'△	11'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'			1.02	1.58	2.15	2.75	10	12	13	15
30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	2½"	3"	1.23	1.98	2.74	3.50	12	14	15	17
36"	5'-1"	2.87'	11.31◇	14.18'	11.03◇	15'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	2½"	3"	1.40	2.38	3.33	4.24	13	15	17	20
42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	2½"	3½"	1.60	2.83	4.04	5.26	14	17	19	22
48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	2½"	3½"	1.81	3.26	4.70	6.14	15	18	21	24
54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	16.08'	23.75'	31.42'	1.46'	3"	4"	2.03	3.78	5.54	7.28	17	20	23	27
60"	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	3"	4"	2.28	4.36	6.43	8.50	18	22	25	29

△ 6.42' △ 6.25' Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.40' ◇ 10.10' Dimensions permitted to allow use of 12' standard pipe lengths.
△ ◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



TOP VIEW-SINGLE PIPE

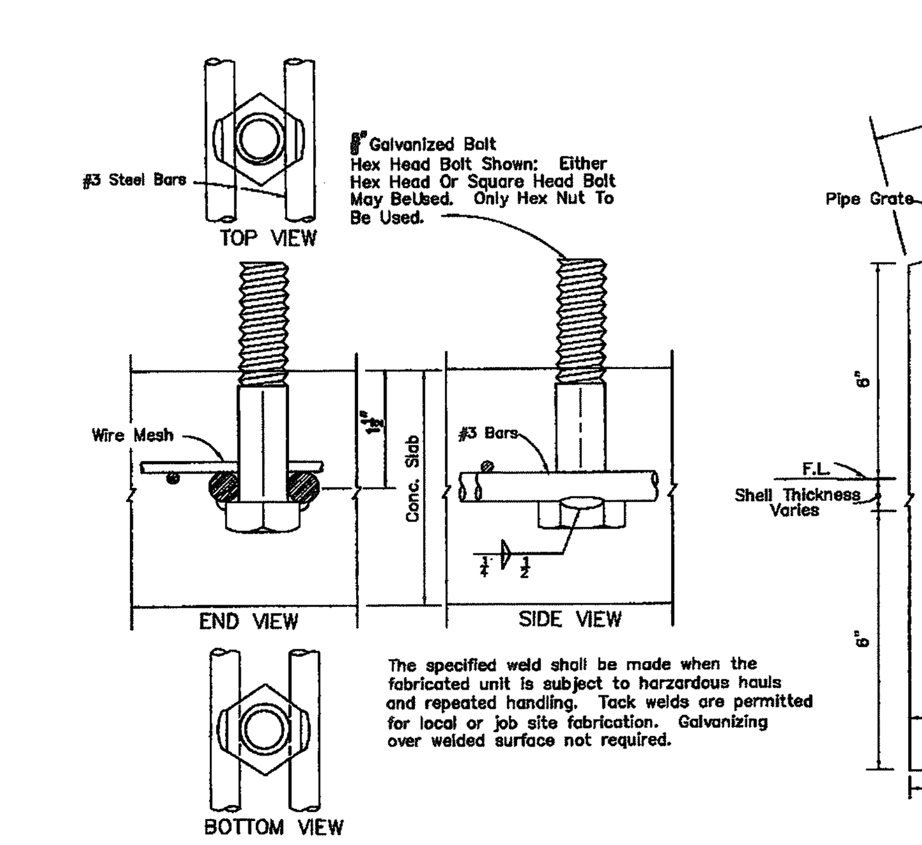


SECTION

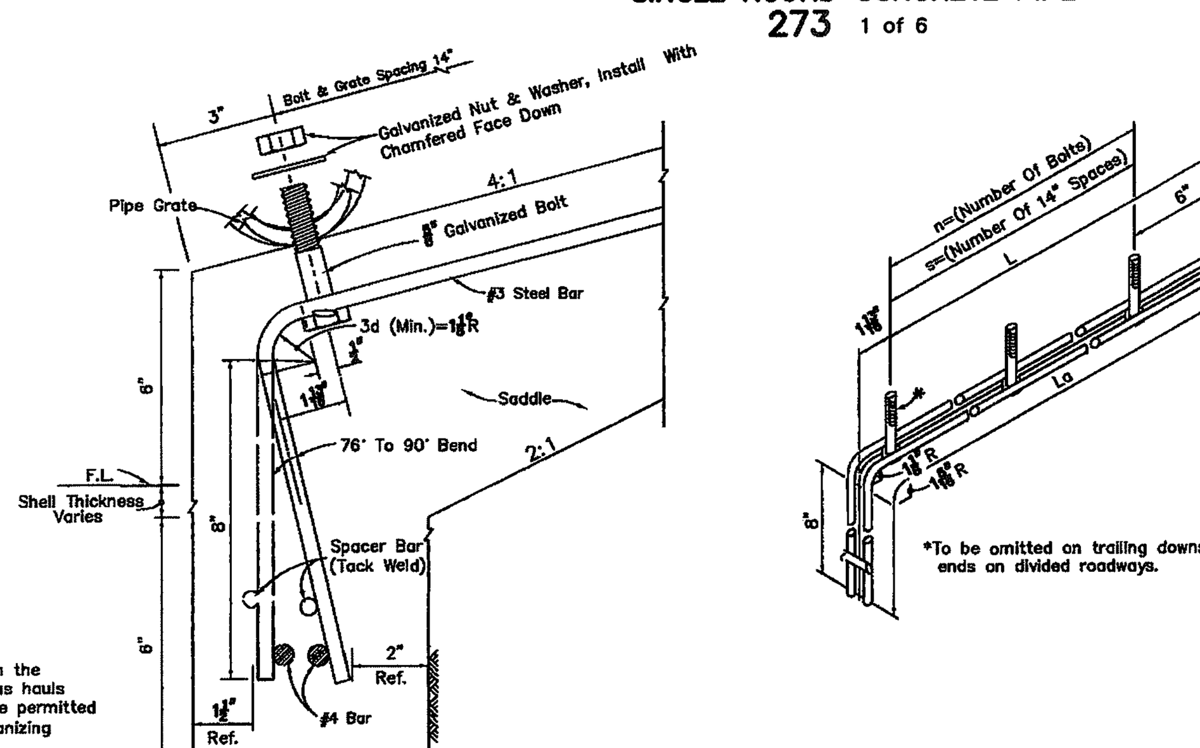
*Slope:
To | Pipe For Pipes 18" And Smaller
2:1 For Pipes 24" And Larger.

SIDE DRAIN
MITERED END SECTION
SINGLE ROUND CONCRETE PIPE
273 1 of 6

Note: See Sheets 5 and 6 for details and general notes.



The specified weld shall be made when the fabricated unit is subject to hazardous hauls and repeated handling. Tack welds are permitted for local or job site fabrication. Galvanizing over welded surface not required.



FOR ALL SIZES OF SINGLE AND MULTIPLE DRAIN PIPE
FASTENER UNIT

Drain Size	s	n	L	La
CONCRETE PIPE (ROUND)				
15"	3	4	4'-0"	4'-11"
18"	4	5	5'-2"	6'-1"
24"	6	7	7'-6"	8'-5"
30"	7	8	8'-8"	9'-7"
36"	9	10	11'-0"	11'-11"
42"	11	12	13'-4"	14'-3"
48"	13	14	15'-8"	16'-7"
54"	14	15	16'-10"	17'-9"
60"	16	17	19'-2"	20'-1"
CORRUGATED METAL PIPE (ROUND)				
15"	2	3	2'-10"	3'-9"
18"	3	4	4'-0"	4'-11"
24"	5	6	6'-4"	7'-3"
30"	7	8	8'-8"	9'-7"
36"	8	9	9'-10"	10'-9"
42"	10	11	12'-2"	13'-1"
48"	12	13	14'-6"	15'-5"
54"	14	15	16'-10"	17'-9"
60"	15	16	18'-0"	18'-11"
CORRUGATED METAL PIPE (ARCH)***				
17"!13"	1	2	1'-8"	2'-7"
21"!15"	2	3	2'-10"	3'-9"
28"!20"	4	5	5'-2"	6'-1"
35"!24"	5	6	6'-4"	7'-3"
42"!29"	6	7	7'-6"	8'-5"
49"!33"	7	8	8'-8"	9'-7"
57"!38"	9	10	11'-0"	11'-11"
64"!43"	10	11	12'-2"	13'-1"
71"!47"	12	13	14'-6"	15'-5"

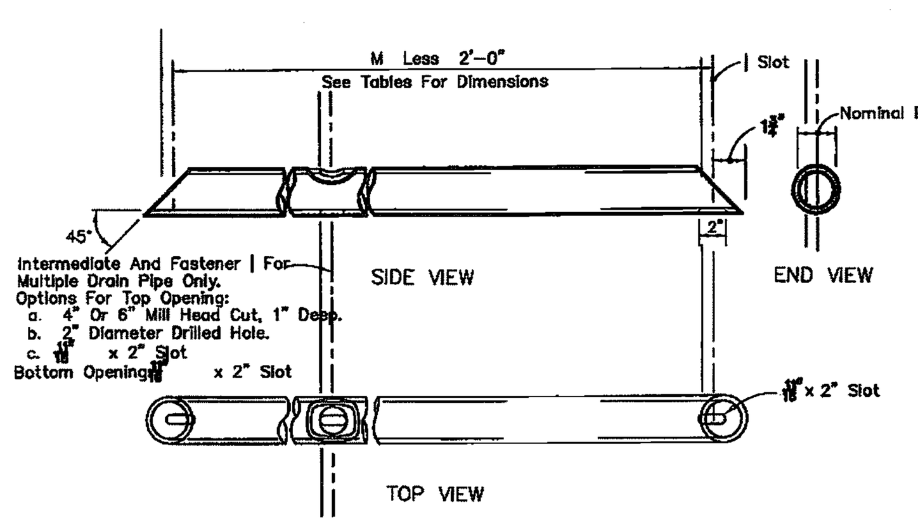
(** beside the 15"–24" rows of each group)

Drain Size	s	n	L	La
ELLIPTICAL CONCRETE PIPE				
12"!18"	2	3	2'-10"	3'-9"
14"!23"	3	4	4'-0"	4'-11"
19"!30"	4	5	5'-2"	6'-1"
24"!38"	5	6	6'-4"	7'-3"
29"!45"	7	8	8'-8"	9'-7"
34"!53"	8	9	9'-10"	10'-9"
38"!60"	10	11	12'-2"	13'-1"
43"!68"	11	12	13'-4"	14'-3"
48"!76"	13	14	15'-8"	16'-7"
53"!83"	14	15	16'-10"	17'-9"
58"!91"	15	16	18'-0"	18'-11"

Note: 3" bolts are standard for all grate fasteners, except when the contractor elects to use the slotted upper holes for the intermediate fasteners on multiple drain pipe, which will require the following bolt lengths:

Grate Size (Std. & X-Stg.)	Bolt Length
2½"	5½"
3"	6"
3½"	6½"
4"	7"

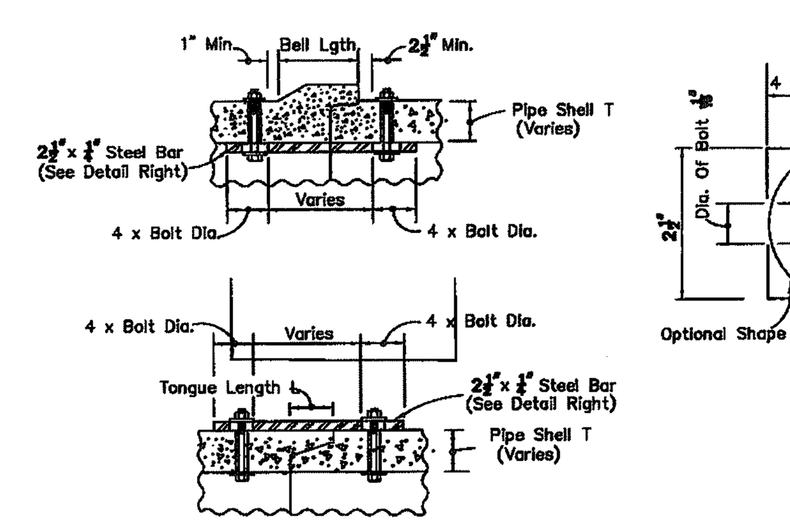
**To be used only when grates are called for in the plans.
***1974 AASHTO Pipe Arch Sizes.



See General Notes, Sheet 6.

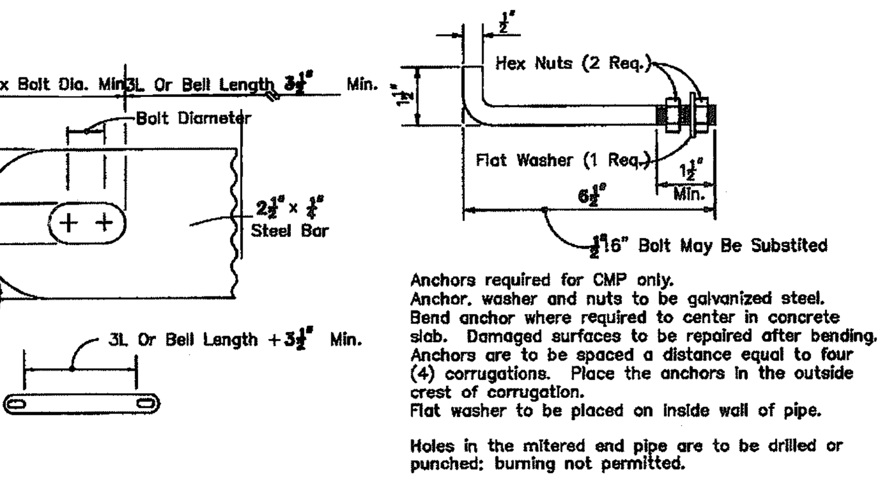
GRATE DETAIL

FOR SINGLE & MULTIPLE DRAIN PIPE



All bars, bolts, nuts and washers are to be galvanized steel.
Bolt diameters shall be for 15" to 36" pipe and for 42" to 60" pipe.
Two connectors required per joint, located 60° right and left of bottom center of pipe.
Bolt holes in pipe shell are to be drilled.

CONCRETE PIPE CONNECTOR DETAIL

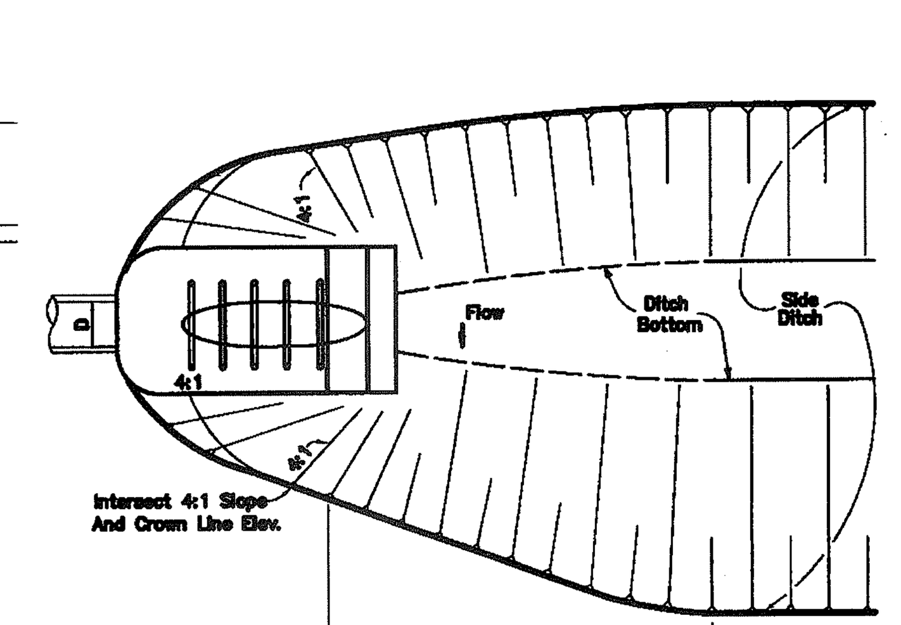


Anchors required for CMP only.
Anchor, washer and nuts to be galvanized steel.
Bend anchor where required to center in concrete slab. Damaged surfaces to be repaired after bending.
Anchors are to be spaced a distance equal to four (4) corrugations. Place the anchors in the outside crest of corrugation.
Flat washer to be placed on inside wall of pipe.
Holes in the mitered end pipe are to be drilled or punched; burning not permitted.

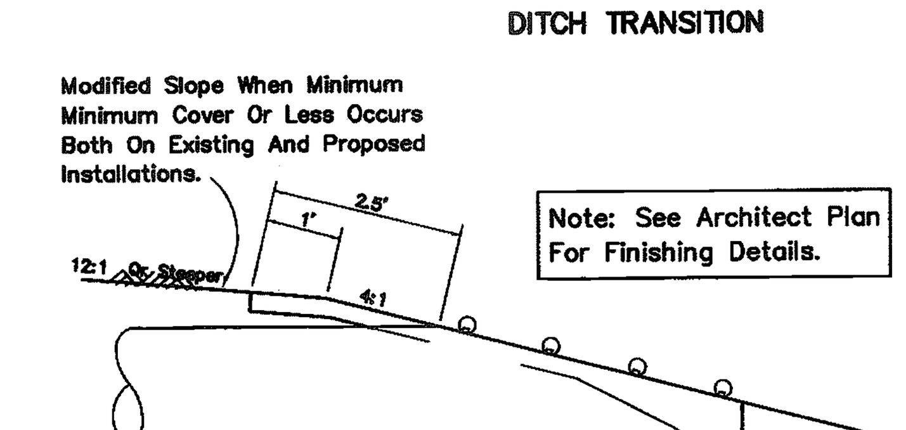
ANCHOR DETAIL

SIDE DRAIN
MITERED END SECTION
273 5 of 6

DETAILS FOR CONCRETE & CORRUGATED METAL PIPE



PLAN
DITCH TRANSITION



Modified Slope When Minimum Minimum Cover Or Less Occurs Both On Existing And Proposed Installations.

Note: See Architect Plan For Finishing Details.

PERMISSIBLE PAVEMENT MODIFICATION

SIDE DRAIN
MITERED END SECTION
NOTES & INFORMATION
273 6 of 6

GENERAL NOTES

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of side drain pipe; corrugated steel pipe mitered end sections may be used with any type of side drain pipe except aluminum pipe; and. corrugated aluminum mitered end sections may be used with any type of side drain pipe except steel pipe. When bituminous coated metal pipe is specified for side drain pipe, mitered end sections shall be constructed with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the side drain pipe, a concrete jacket shall be constructed in accordance with Index No. 280.
2. Concrete pipe used in the assembly of mitered end sections shall be of selective lengths to avoid excessive connections.
3. Corrugated metal pipe galvanizing that is damaged during beveling and perforating for mitered end section shall be repaired.
4. That portion of corrugated metal pipe in direct contact with the concrete slab shall be bituminous coated prior to placing of the concrete.
5. Corrugated polyethylene pipe (CPE) for side drain application of 15". 18" or 24" diameter shall utilize either corrugated metal or concrete mitered end sections. When used in conjunction with corrugated metal mitered end sections, connection shall be by either a formed metal band specifically designated to join CPE pipe and metal pipe or other coupler approved by the State Drainage Engineer. When used in conjunction with a concrete mitered end section. connection shall be by concrete jacket constructed in accordance with Index No. 280.
6. When existing multiple side drain pipes are spaced other than the dimensions shown in this detail, or have non-parallel axes, or have non-uniform sections. the mitered end sections will be constructed either separately as single pipe mitered end sections or collectively as multiple pipe end sections as directed by the Engineer; however. mitered end sections will be paid for each, based on each independent pipe end.
7. In addition to the requirements of Section 430-4. side drain culverts shall comply with the bedding and backfill requirements shown on Index No. 280.
8. The reinforced concrete slab shall be constructed for all sizes of side drain pipe and cast in place with Class ~ concrete.
9. Round pipe size 30" or greater, pipe-arch size 35"!24" or greater and elliptical pipe 19"!30" or greater shall be grated unless excepted in the plans. Smaller sizes of pipe shall be grated only when called for in plans. The lower grate on trailing downstream ends on divided highways shall be omitted.
10. Grates are to be fabricated from steel ASTM A 53, Grade B, pipe. The lower grate on all traffic approach ends shall be Schedule 80 and all remaining grates shall be Schedule 40. Grates subject to salt free and corrosive free environment may be fabricated from galvanized pipe, with base metal exposed during fabrication repaired as specified in Section 562, Standard Specifications; or, fabricated from black pipe and hot dipped galvanized after fabrication in accordance with ASTM A 123. Grates subject to salt water or highly corrosive environment shall be hot dipped galvanized after fabrication in accordance with ASTM A 123.
11. Ditch transitions shall be used on all grades in excess of 3% as directed by the Engineer.
12. The project engineer shall contact the District Drainage Engineer for possible alternate treatment prior to constructing side drain mitered end sections where a minimum spacing of 30' will not result between the toe points of the mitered end sections.
13. The cost of all pipe (s), grates, fasteners, reinforcing, connectors, anchors, concrete, sealants. jackets and coupling bands shall be included in the cost for the mitered end section. Sodding shall be paid for separately under the contract unit price for Sodding, SY.
14. Mitered end sections shall be paid for under the contract unit price for Mitered End Section (SD). Each. based on each independent pipe end.

DESIGN NOTES

1. In critical hydraulic locations. grates shall not be used until potential debris transport has been evaluated by the drainage engineer and appropiate adjustments made. Ditch grades in excess of 3% or pipe with less than 1.5' of cover and grades in excess of 1% will require such an evaluation (General Note 9).
2. The design engineer shall determine highly corrosive locations and specify in the plans when the grates shall be hot-dipped galvanized after fabrication (General Note 10).
3. The design engineer shall determine and designate in the plans which alternate types of mitered end section will not be permitted. The restriction shall be based on corrosive or structural requirements.

67971-2

RECEIVED
AUG 1 4 2006
PDS
ALTAMONTE SVC. CTR.

CERT. OF AUTHORIZATION # 7350

SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44877
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1600 EAST ROBINSON STREET, SUITE 400
ORLANDO, FLORIDA 32803
(407) 898-7858 FAX (407) 898-1488

No.	DATE	REVISION
6		
5		
4		
3		
2		
1		

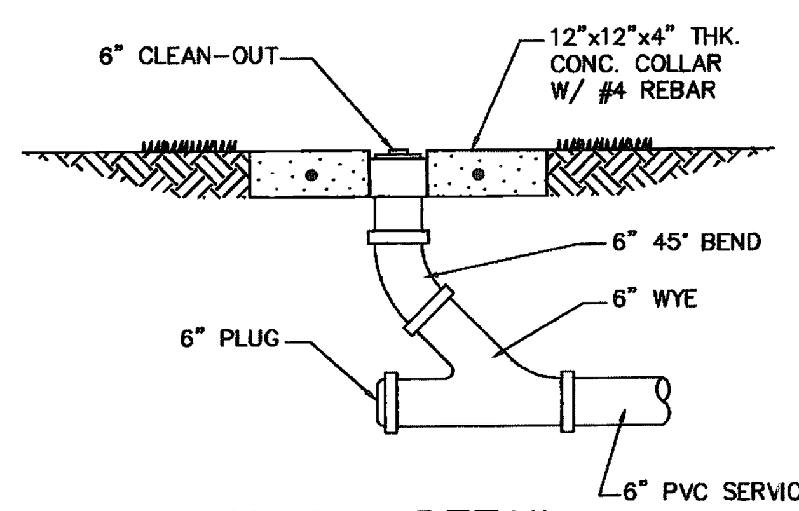
PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

SITE DETAILS

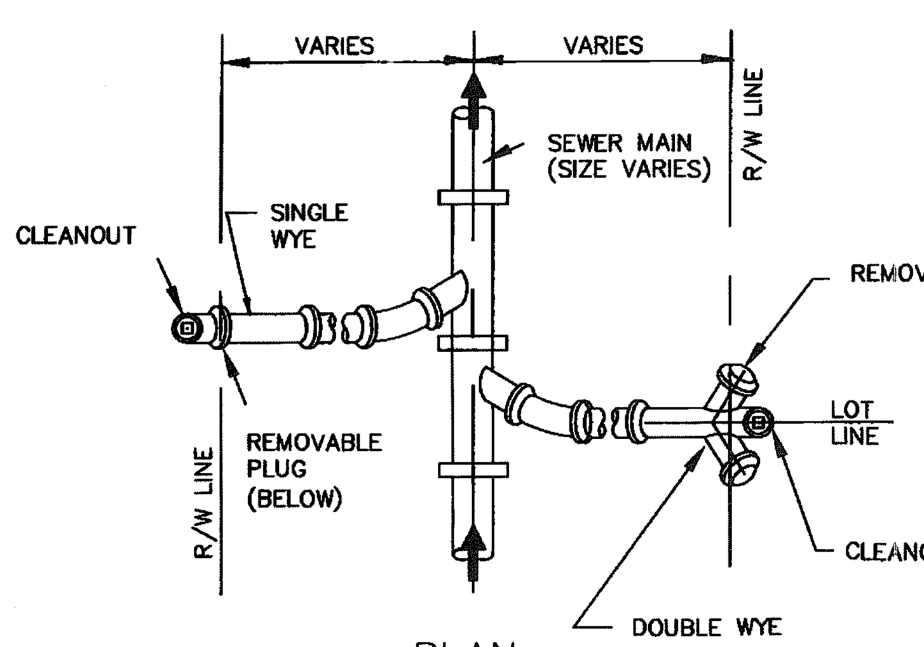
DRAWN: CAG
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET
C-8



CLEAN-OUT DETAIL

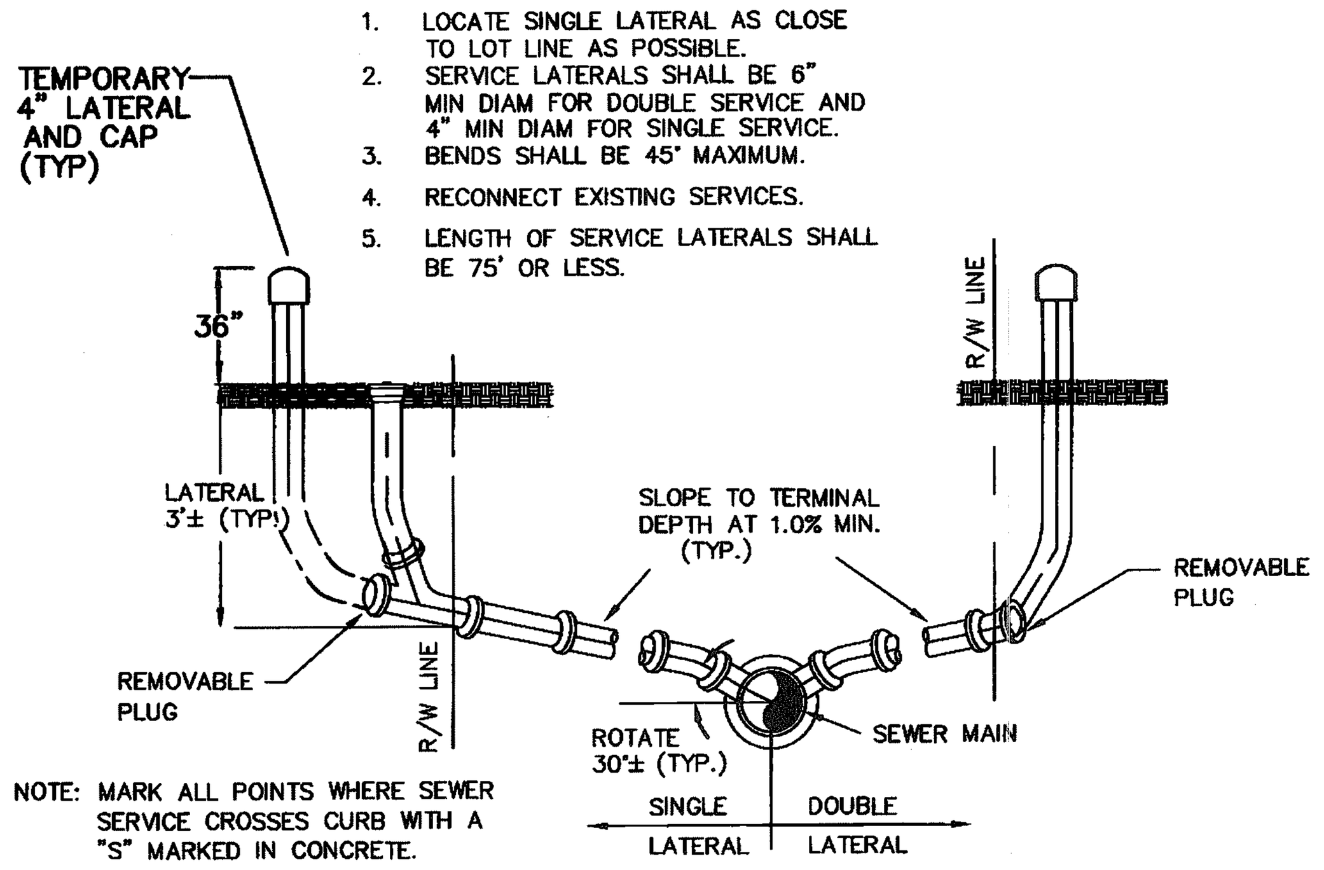
NTS



PLAN

NOTES:

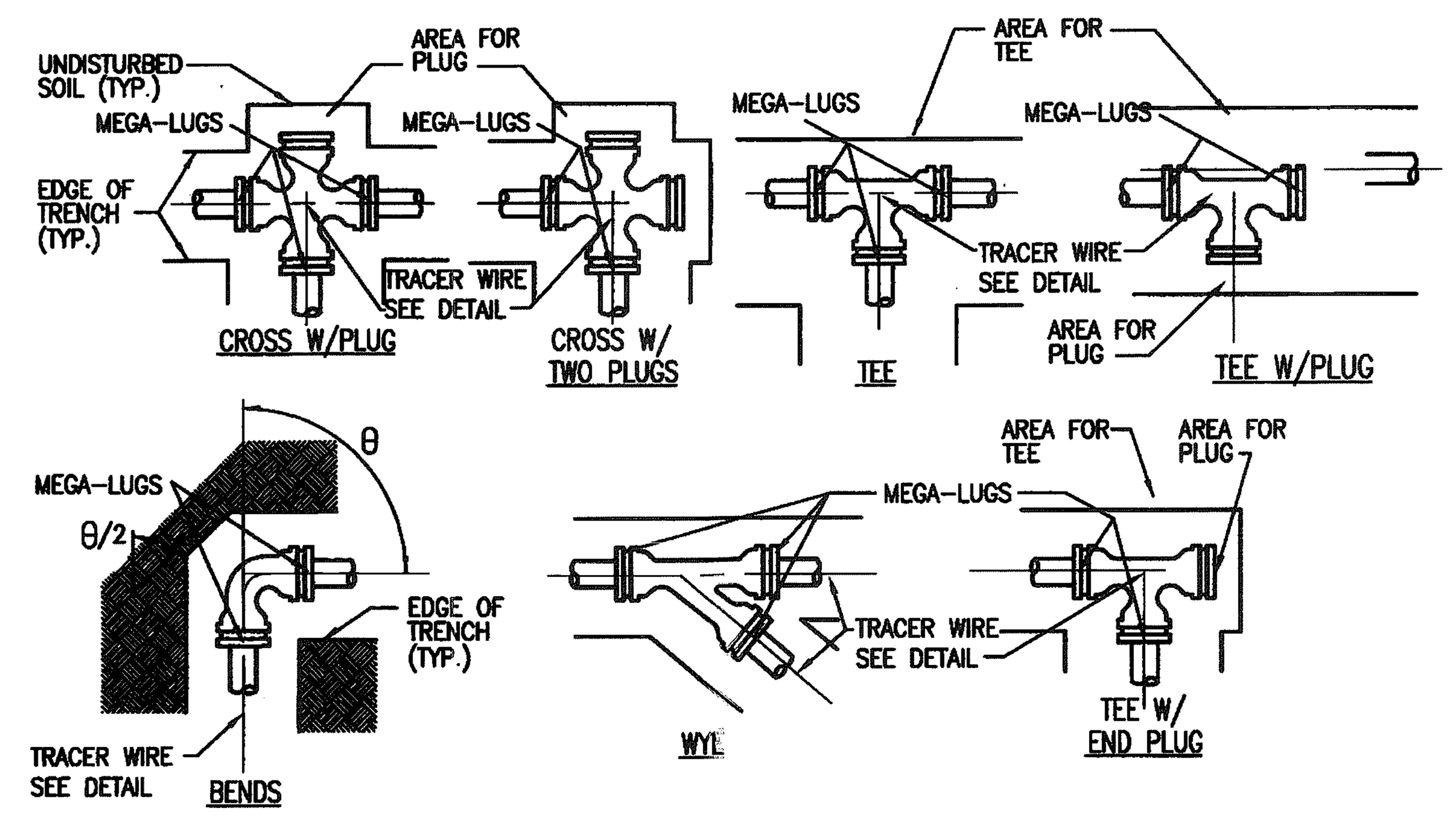
1. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE.
2. SERVICE LATERALS SHALL BE 6" MIN DIAM FOR DOUBLE SERVICE AND 4" MIN DIAM FOR SINGLE SERVICE.
3. BENDS SHALL BE 45° MAXIMUM.
4. RECONNECT EXISTING SERVICES.
5. LENGTH OF SERVICE LATERALS SHALL BE 75' OR LESS.



NOTE: MARK ALL POINTS WHERE SEWER SERVICE CROSSES CURB WITH A "S" MARKED IN CONCRETE.

SEWER SERVICE RISER CONNECTION DETAILS

NTS



NOTES:
USE "MEGA-LUG" FITTINGS AS APPROVED BY THE PROJECT ENGINEER. "MEGA-LUG" CALCULATIONS TO BE PROVIDED BY THE CONTRACTOR AND APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.

PIPE SIZE	HORIZONTAL BENDS			
	11 1/4°	22 1/2°	45°	90°
4"	1'	3'	6'	15'
6"	2'	4'	9'	21'
8"	3'	5'	11'	27'
10"	3'	6'	14'	33'
12"	4'	8'	16'	38'
16"	5'	10'	20'	48'
20"	6'	11'	24'	58'

DEAD ENDS & IN-LINE VALVES	
PIPE DIA.	MIN. LENGTH
4"	42'
6"	60'
8"	78'
10"	94'
12"	111'
16"	142'
20"	172'

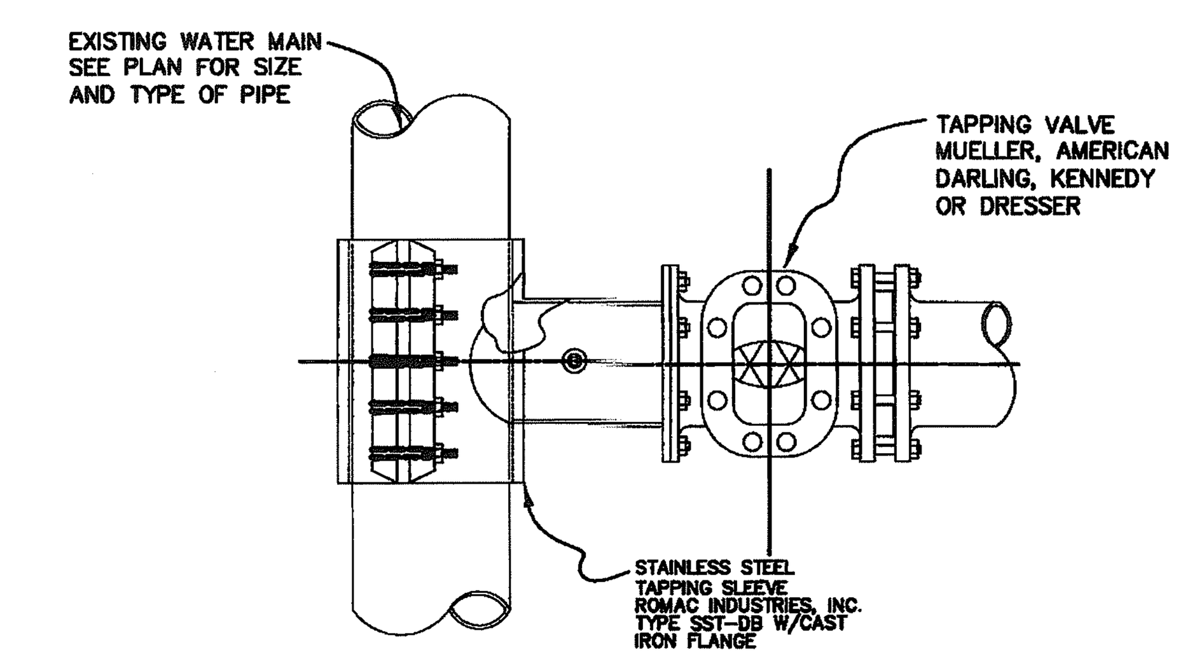
REDUCERS						
SMALL END	LARGE END					
	6"	8"	10"	12"	16"	20"
4"	31'	56'	76'	96'	131'	164'
6"		33'	58'	80'	120'	155'
8"			31'	59'	104'	142'
10"				54'	100'	139'
12"					60'	108'
16"						60'

BRANCH SIZE	TEES						
	4"	6"	8"	10"	12"	16"	20"
4"	6'	4'	3'	3'	2'	2'	2'
6"		8'	6'	5'	4'	3'	3'
8"			10'	8'	7'	5'	4'
10"				11'	12'	7'	6'
12"					13'	10'	8'
16"						18'	13'
20"							20'

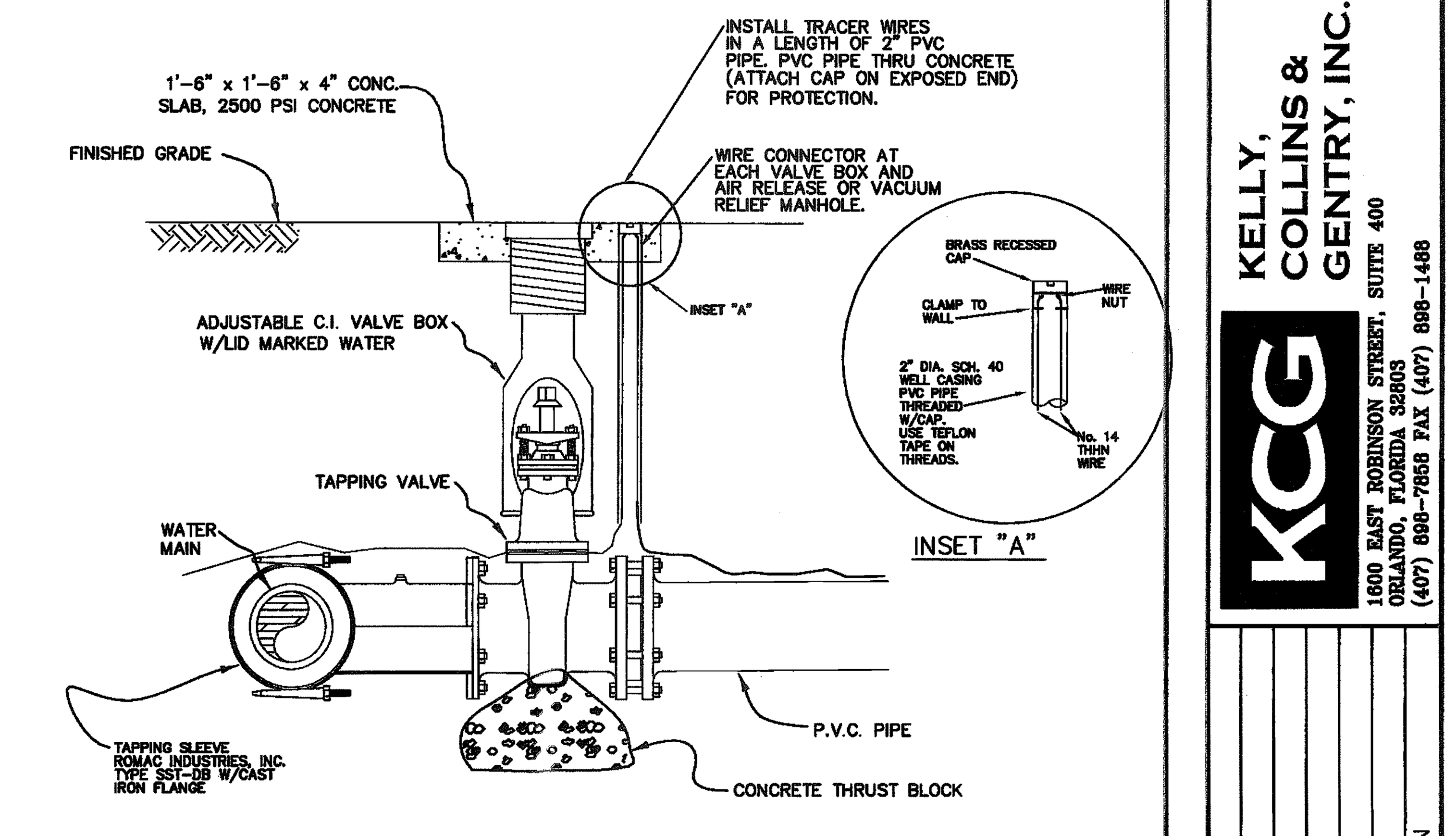
NOTES:
LENGTH OF RESTRAINED PIPING WAS CALCULATED USING "THRUST RESTRAINT DESIGN FOR DUCTILE IRON AND PVC PIPE" (VERSION 3.1) A COMPUTER PROGRAM BY EBBA IRON SALES, INC.
1.) SOIL TYPE: WELL GRADED SANDS AND GRAVELY SANDS, LITTLE OR NO FINE SANDS.
2.) TRENCH TYPE: PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO 1/8 PIPE DIAMETER, 4" MINIMUM. BACK FILL COMPACTED TO THE TOP OF PIPE. (APPROXIMATELY 80% STANDARD PROCTOR, AASHTO T-99).
3.) PIPE TEST PRESSURE: 150 PSI
4.) SAFETY FACTOR: 2.0
5.) DEPTH OF COVER: 3.0 FEET
6.) APPROVED BY CITY ENGINEER.

MEGA-LUG DETAIL & THRUST RESTRAINT TABLE

NTS

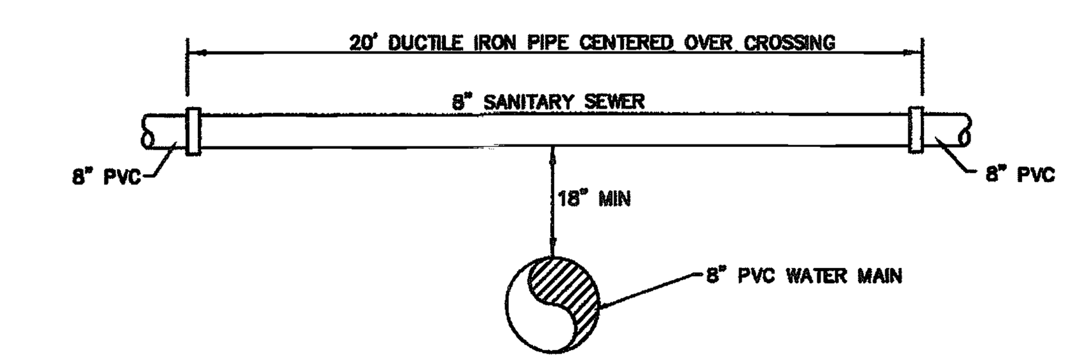


TAPPING SLEEVE DETAIL
PLAN VIEW



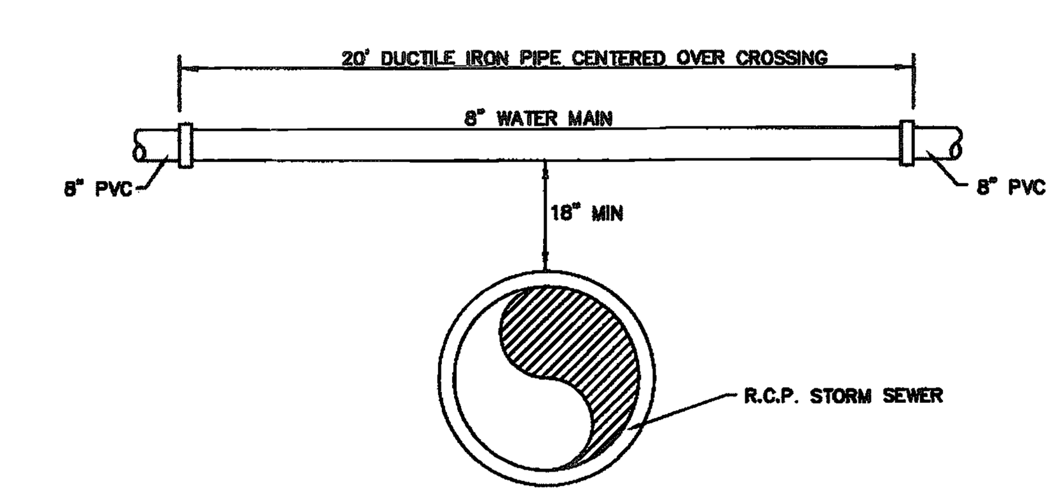
TAPPING SLEEVE DETAIL
ELEVATION VIEW

NTS



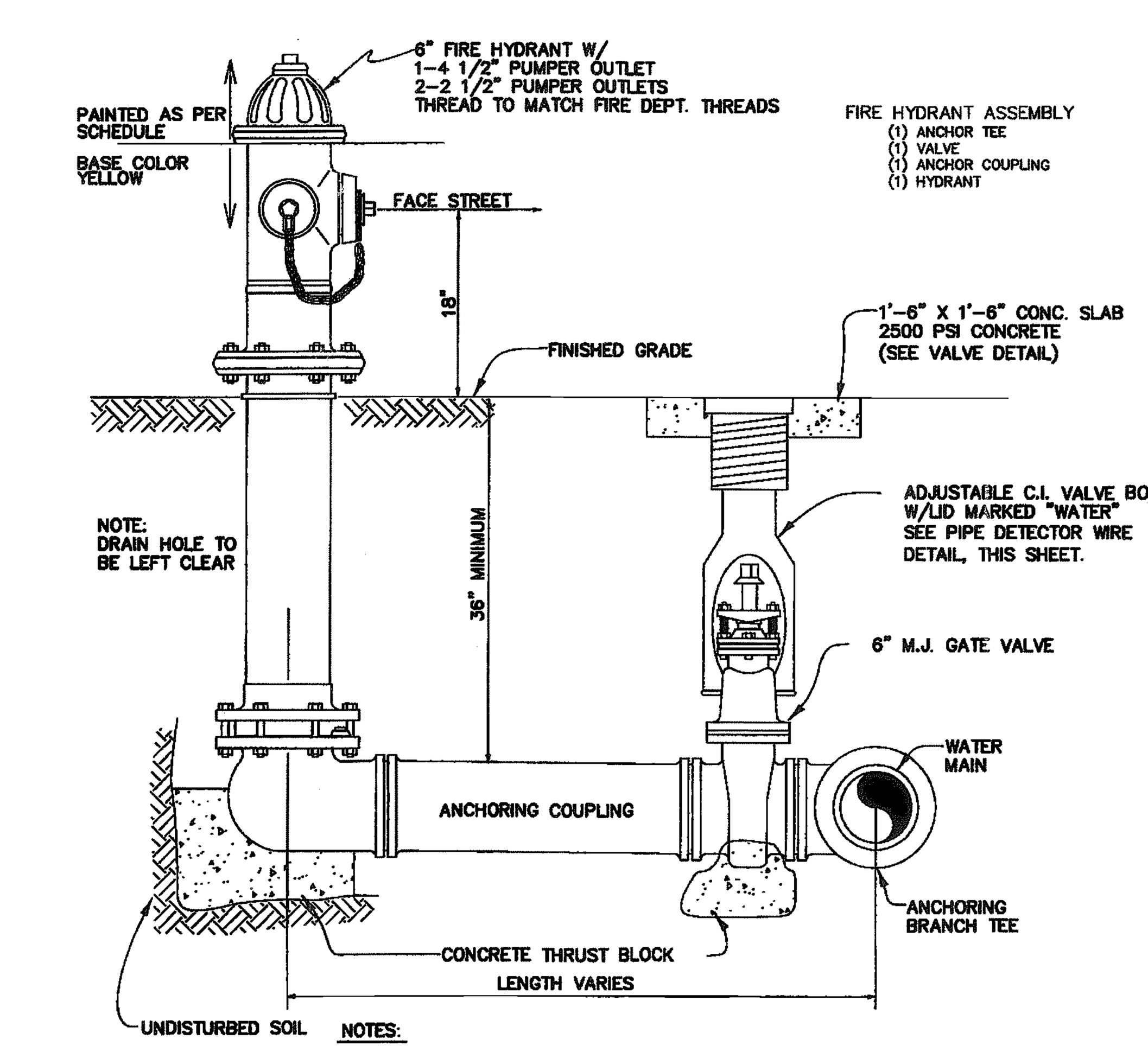
WATER MAIN / SANITARY SEWER CROSSING DETAIL

NTS



WATER MAIN / STORM SEWER CROSSING DETAIL

NTS

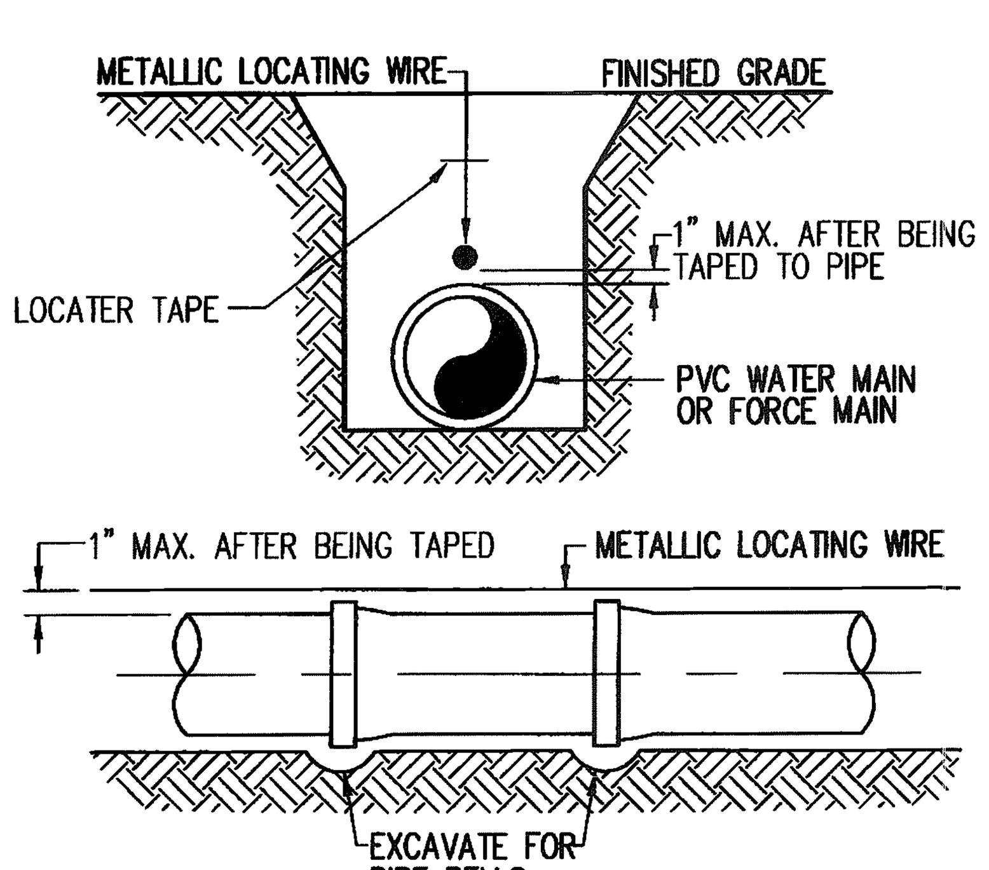


NOTES:

1. FIRE HYDRANTS SHALL BE MUELLER A-423.
2. HYDRANT SHALL BE SUPPLIED WITH DRAIN.
3. HYDRANT SHALL BE PAINTED IN ACCORDANCE WITH THE FOLLOWING COLORING DESIGNATION BASED ON THE TESTED FLOWS:
   - BASE HYDRANT – YELLOW
   - LESS THAN 500 GPM – RED
   - 500 TO 999 GPM – ORANGE
   - 1000 TO 1499 – GREEN
   - 1500 AND GREATER – BLUE
4. PAINT SHALL BE SHERWIN-WILLIAMS INDUSTRIAL GRADE OSHA:
   - RED #B54 R 38
   - YELLOW #B54 Y 37
   - GREEN #B54 G 14
   - ORANGE #B54 E 39
   - BLUE #SW4086
5. HYDRANTS TO BE FLOW TESTED BY CONTRACTOR COORD WITH CITY ENGINEER FOR TESTING PROCEDURES.

FIRE HYDRANT DETAIL

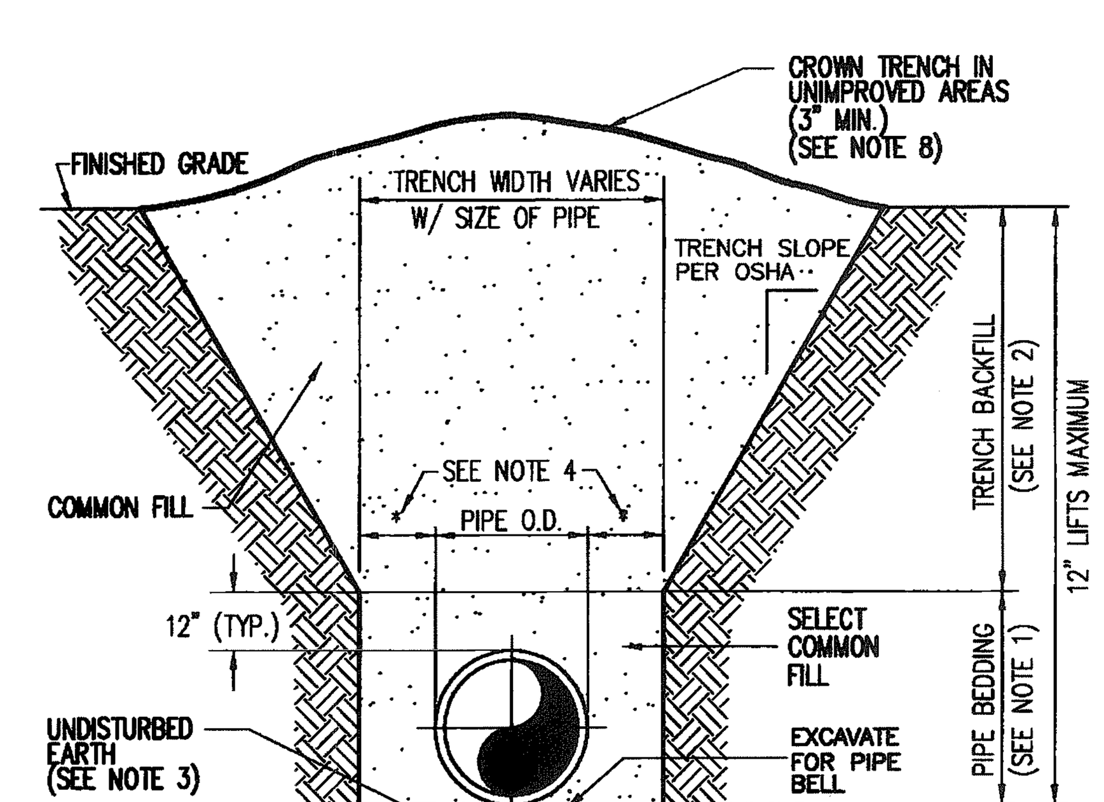
LENGTH VARIES



NOTES:
1. PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (14 GAUGE COPPER) CAPABLE OF DETECTION BY A CABLE LOCATOR
2. AND SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX
3. AND BE CAPABLE OF EXTENDING 12" ABOVE TOP OF BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION. USE DUCT TAPE AS NECESSARY TO HOLD WIRE DIRECTLY ON THE TOP OF THE PIPE.

PVC PIPE LOCATING WIRE DETAIL

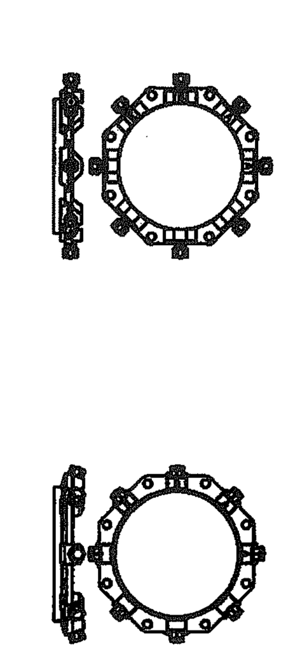
NTS



NOTES:
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. SHEETING AND BRACING SHALL BE USED IN ACCORDANCE WITH CURRENT TRENCHING REGULATIONS AND WHERE UNSAFE CONDITIONS EXIST.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY OF CLERMONT RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

TYPE B BEDDING AND TRENCHING DETAIL

NTS



EBAA IRON
MEGA-LUG Series 2000
PRESSURE RATINGS FOR ORDINARY WATER WORKS:

DR14 200 PSI SDR17 250 PSI
DR18 150 PSI SDR21 200 PSI
DR25 100 PSI SDR26 160 PSI

(UL) <FM> RATED 150 PSI ON DR18
EXCEEDS UNI-B-13 OF 92
FOR USE ON PVC PIPE
MADE IN THE USA

EBAA IRON
MEGA-LUG Series 1100
350 PSI RATING
(UL)
<FM> RATED 175 PSI
FOR USE ON DUCTILE IRON PIPE
MADE IN THE USA

MEGALUG DETAIL

67971-2

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

CERT. OF AUTHORIZATION # 7350

SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1600 EAST ROBINSON STREET, SUITE 400
ORLANDO, FLORIDA 32803
(407) 898-7858 FAX (407) 898-1488

6		
5		
4		
3		
2		
1		
	DATE	REVISION

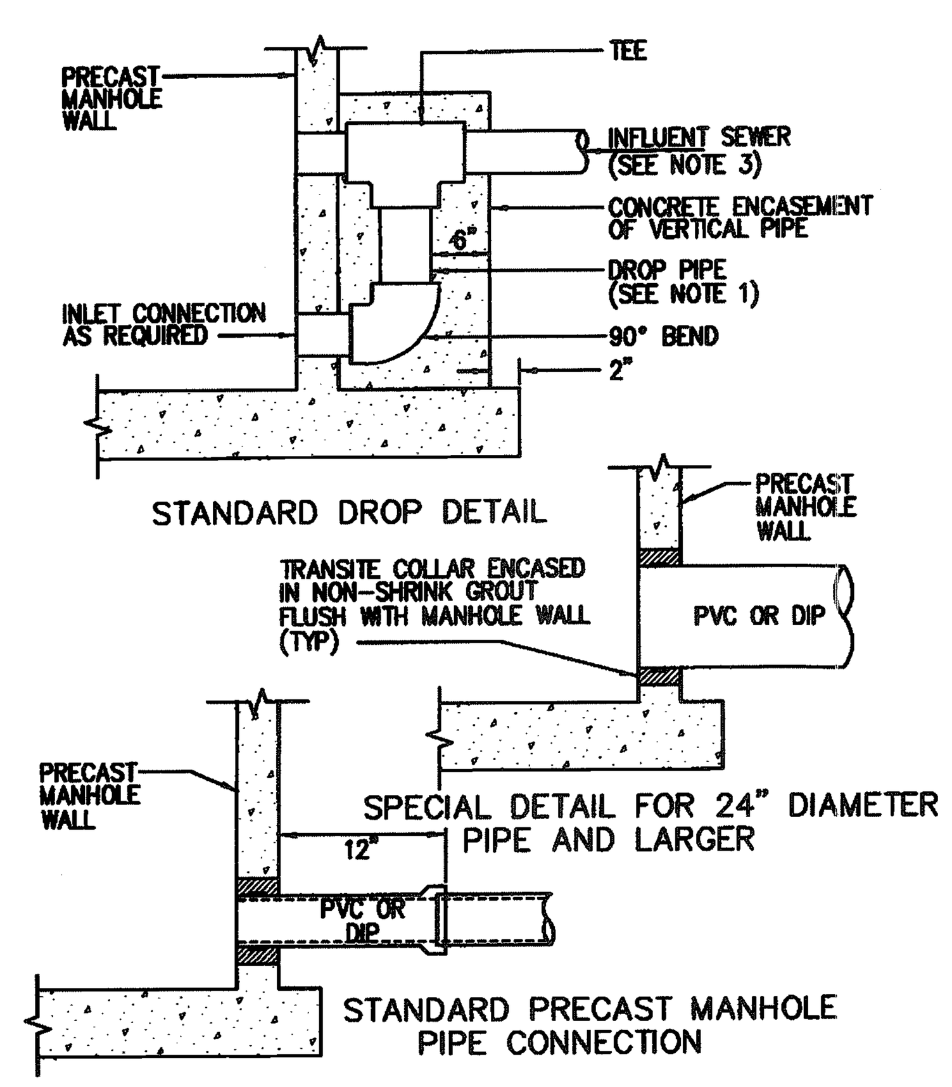
PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

SITE DETAILS

DRAWN: CAG
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET
C-9

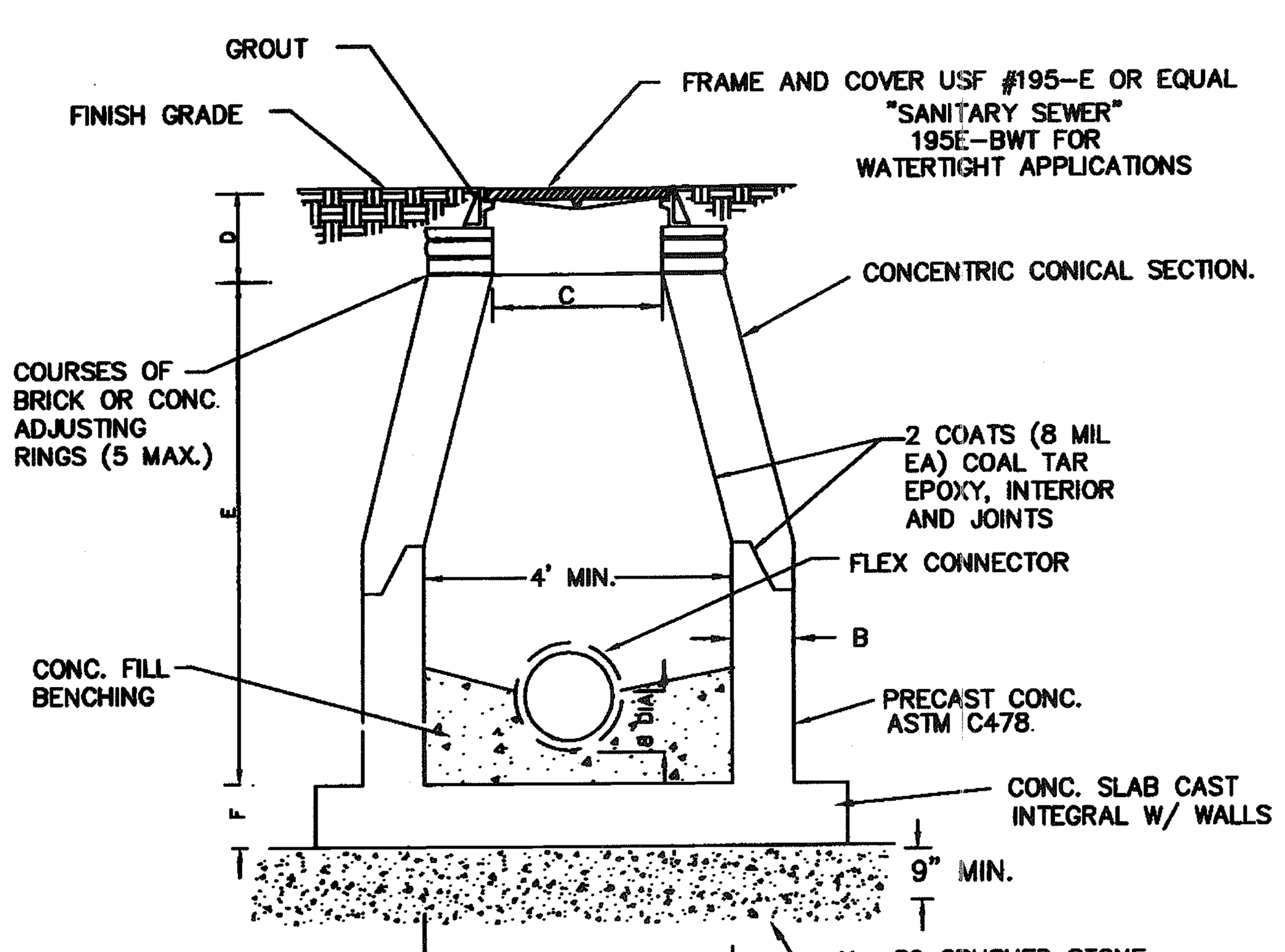


NOTES:

1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. THE CITY MAY APPROVE ALTERNATE WATER TIGHT CONNECTION DETAILS FOR CONNECTION OF 24" DIAMETER PIPES AND LARGER.
3. AN OUTSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT PIPES WHICH HAVE AN INVERT 2' OR MORE ABOVE THE MANHOLE INVERT.
4. MANHOLES RECEIVING DIRECT FORCE MAIN FLOW SHALL BE CONSTRUCTED WITH A HIGH DENSITY POLYETHYLENE LINER CAST IN DURING CONSTRUCTION. THIS LINER SHALL BE AGRU SURE GRIP, OR EQUAL.

MANHOLE CONNECTION DETAILS

NTS



NOTES:

1. PRECAST CONCRETE SHALL BE TYPE 2 CEMENT 4000 PSI
2. LIFT HOLES NOT PERMITTED THROUGH PRECAST SECTIONS.
3. ALL OPENINGS SHALL BE SEALED WITH NON-SHRINK GROUT.
4. INSTALL FLOW CHANNEL INSIDE MANHOLES.
5. SERVICE LATERALS SHALL GENERALLY NOT BE PERMITTED DIRECTLY INTO MANHOLES.
6. PLACE TWO HALF-MOON SHAPED PLYWOOD (3/8"THK. MIN.) IN BOTTOM OF MANHOLE AFTER PIPES HAVE BEEN CONNECTED TO KEEP DEBRIS FROM ENTERING SEWER.
7. REINFORCING STEEL PER ASTM C478-88a.
8. PROVIDE 5' x 5' x 12" CONCRETE COLLAR AROUND COVER FRAME, W/4 #4 BARS E.W., IN UNPAVED AREAS.
9. MANHOLES RECEIVING DIRECT FORCE MAIN FLOW SHALL BE CONSTRUCTED WITH A HIGH DENSITY POLYETHYLENE LINER CAST IN DURING CONSTRUCTION. THIS LINER SHALL BE AGRU SURE GRIP, OR EQUAL.

M.H. DEPTH	A*	B	C	D	E	F
UP TO 12'	48"	5"	24"	15"	AS-REQ'D	8"
12' - 18'	60"	8"	24"	15"	AS-REQ'D	10"
18' & DEEPER	72"	8"	24"	15"	AS-REQ'D	14"

*ENTIRE DEPTH EXCEPT CONE.

MANHOLE SIZE:

UP TO 24" PIPE = 48" Ø, UPTO 36" PIPE = 60" Ø, OVER 36" PIPE = 72" Ø

STANDARD MANHOLE DETAILS

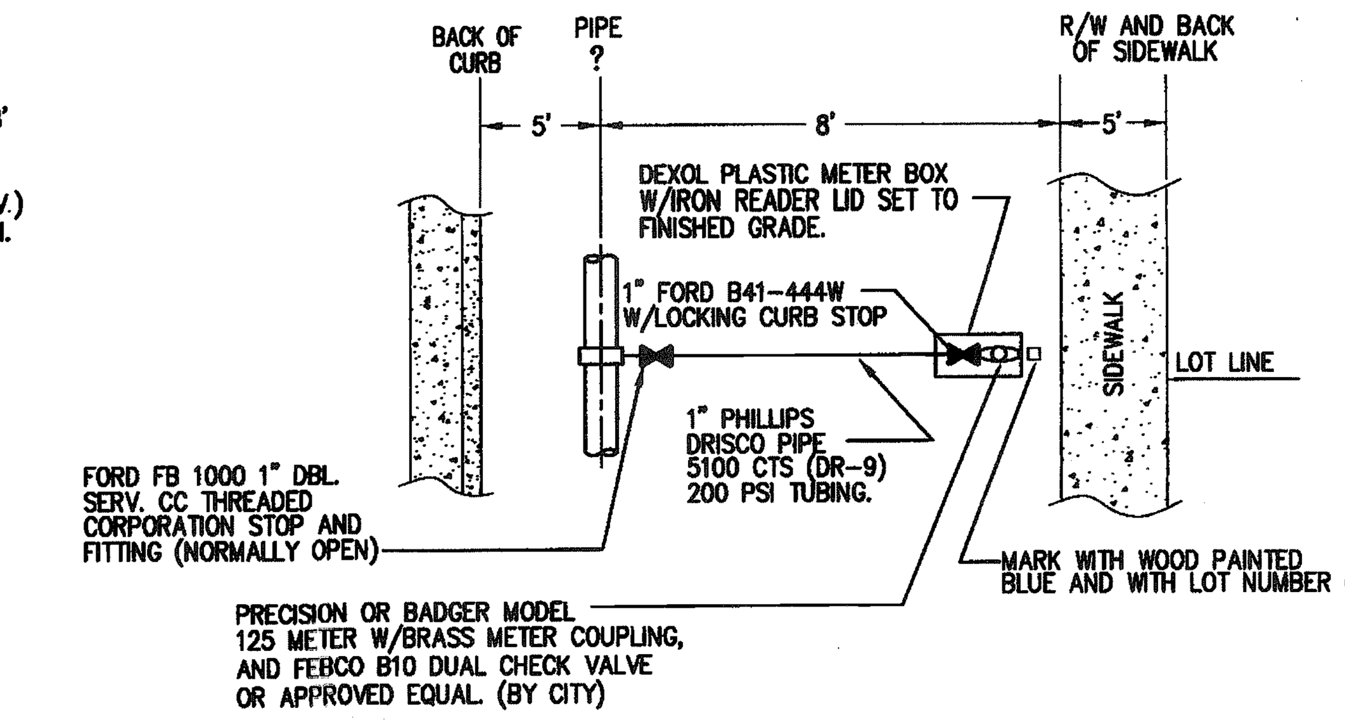
NOT TO SCALE

STANDARD MANHOLE DETAIL

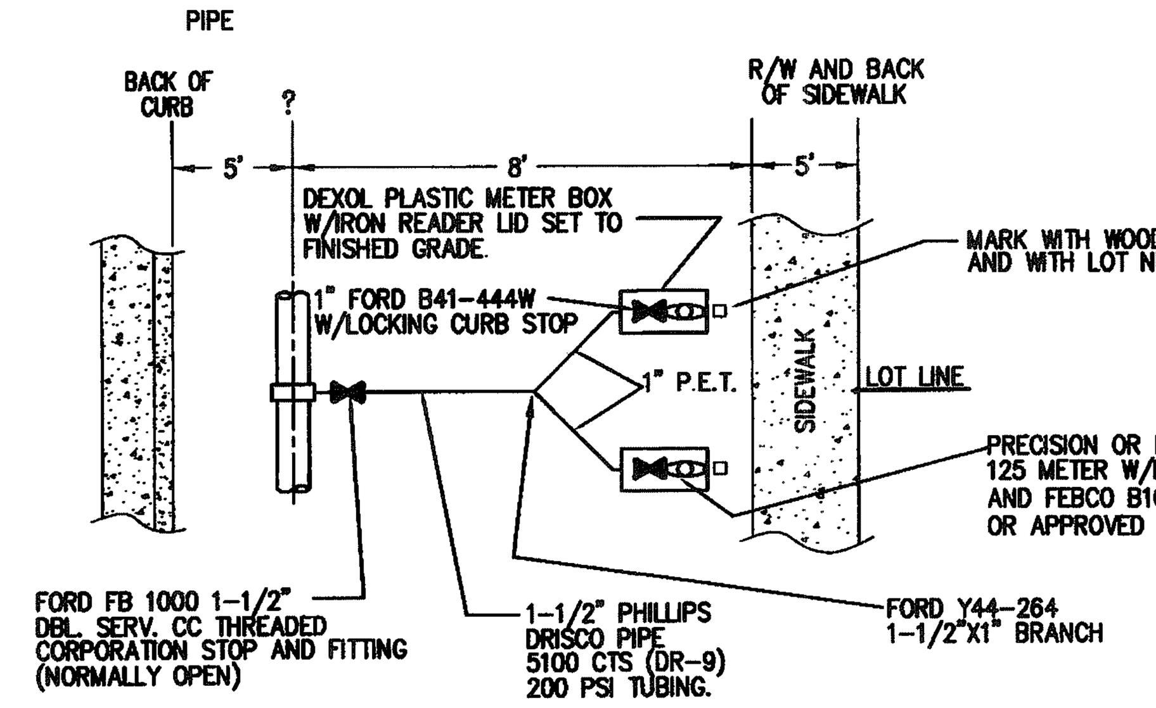
NTS

NOTES:

1. ALL WATER SERVICES AND METER BOXES SHALL BE LOCATED 8' INSIDE THE R/W LINE. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CURB STOP.
2. ALL CLERMONT SERVICE LINES SHALL BE 1" (1-1/2" DBL. SERV.) AWWP C-901 TUBING, DRISCO PIPE, 5100 CTS (DR-9), 200 PSI.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP WHICH SHALL BE CLEARLY MARKED WITH A 2" X 2" X 18" STAKE
4. CURB STOPS SHALL BE 1" FORD B41-444W WITH LOCKWING AND FITTED WITH A 1" MIPT X 3/4" FIPT BRASS BUSHING.
5. ALL WATER SERVICES CROSSING UNDER ROADWAYS TO BE ENCASED IN LARGER SIZE SCHEDULE 40 PVC.
6. EXISTING METER BOXES TO REMAIN, PROVIDE NEW METER BOX FOR NEW SERVICES.
7. MARK CURB "W" WHERE SERVICES ARE LOCATED.
8. PROVIDE TRACER WIRE ALONG SERVICE LINES.
9. SET CURB STOP 8-FEET INSIDE R/W LINE.



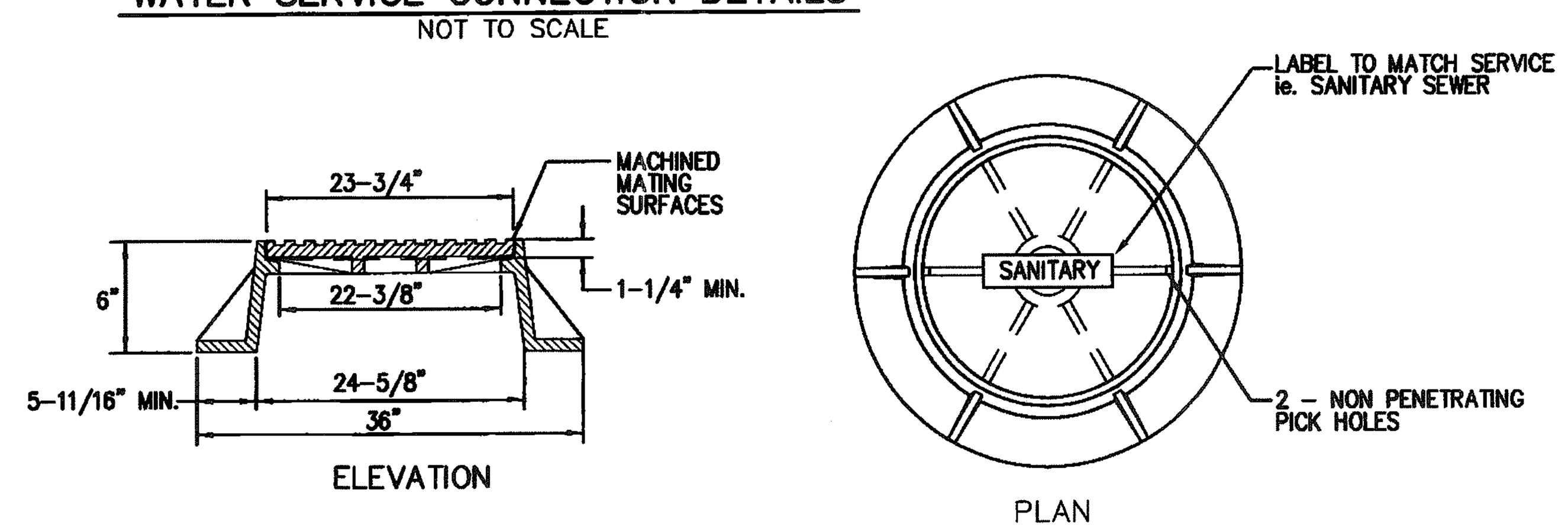
SINGLE SERVICE



DOUBLE SERVICE

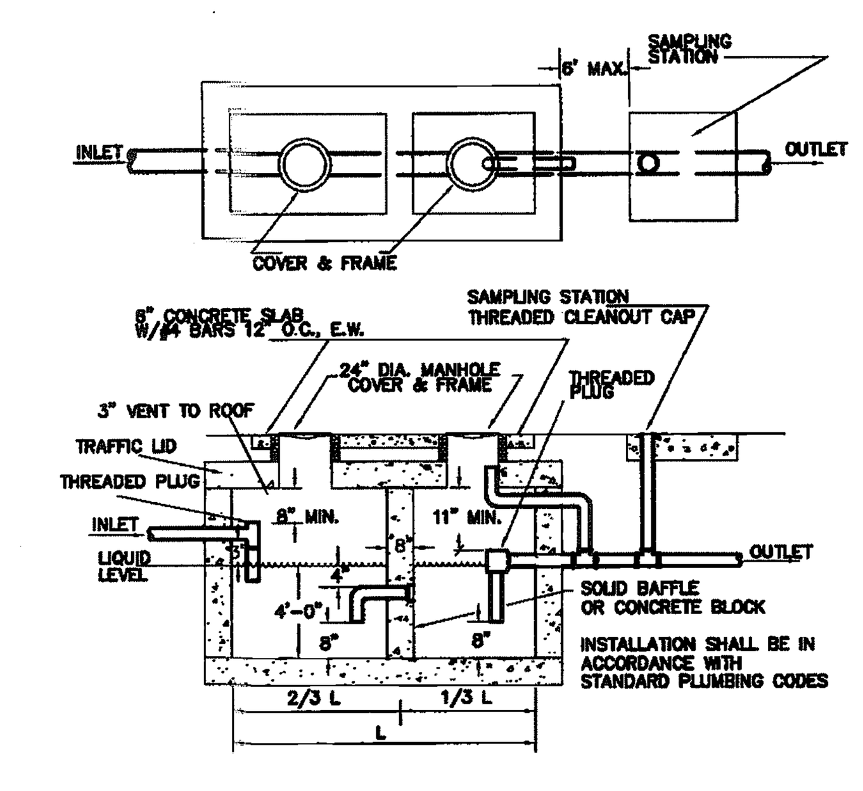
WATER SERVICE CONNECTION DETAILS

NOT TO SCALE



STANDARD MANHOLE FRAME AND COVER

NTS



SIZING FORMULA

(S) X (GS) X (HR/12) X (LF) = EFFECTIVE CAPACITY = OF GREASE INTERCEPTOR = EFFECTIVE CAPACITY

WHERE:

S = NUMBER OF SEATS IN DINNING AREA
GS = GALLONS OF WASTE WATER PER SEAT. (USE 25 GALLONS FOR RESTAURANTS WITH CHINA DISHES AND/OR AUTOMATIC DISHWASHERS)
HR = NUMBER OF HOURS RESTAURANT IS OPEN
LF = LOADING FACTOR (USE 2.00 INTERSTATE HIGHWAY; 1.50 OTHER FREEWAYS; 1.25 RECREATIONAL AREA; 1.00 MAIN HIGHWAY; 0.75 OTHER HIGHWAY)

NOTES:

1. STRUCTURE SHALL BE IN ACCORDANCE WITH F.D.O.T. DESIGN STANDARDS. PROVIDE FOR A MINIMUM H-20 LOADING.
2. COVERS SHALL BE LABELED "OIL INTERCEPTOR".
3. OIL INTERCEPTOR SHALL COMPLY WITH LATEST EDITION OF THE NATIONAL PLUMBING CODE.
4. OIL INTERCEPTOR IS FOR POTENTIAL USE ON FUTURE BUILDINGS. THE TYPE OF BUILDINGS IN NOT KNOWN & 25% OF BUILDING IS USED IN CALC. AS KITCHEN & PREP. AREAS. SHOULD AN OIL INTERCEPTOR BE REQUIRED, IT SHALL BE DESIGNED USING EXACT KNOWN AREAS, THE CALCULATIONS SHOWN ARE REFLECTIVE OF WORSE CASE.
5. CONTRACTOR TO CONFORM TO CITY SPECIFICATIONS & MANUFACTURERS SPECIFICATIONS & RECOMMENDATIONS. INTERCEPTOR TO MEET CITY STANDARDS.

OIL INTERCEPTOR DETAIL (FOR 3-2,400 SF. RESTAURANTS)

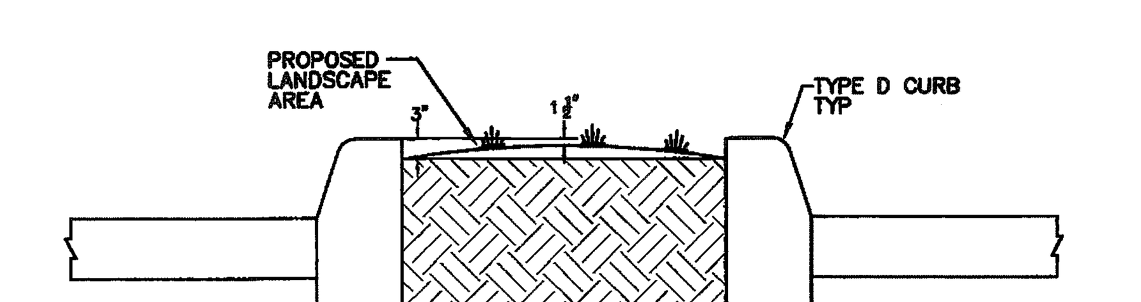
OIL INTERCEPTOR CALCULATIONS

- TOTAL AREA= 2,400 SF
- NON DINNING AREA= 680 SF
- DINNING AREA = 1,720 SF
- 4 SEATS / TABLE= 100 SF / TABLE (INCLUDES SEAT AREA & WALK AREA)
  1,720 SF/100 SF= 12 TABLES @ 4 SEATS
  48 SEATS
- 48 X 25 X (10/12) X .75= 747 GAL.
  USE 750 GAL INTERCEPTOR

OIL INTERCEPTOR DETAIL (FOR 1-1,185 SF. RESTAURANT)

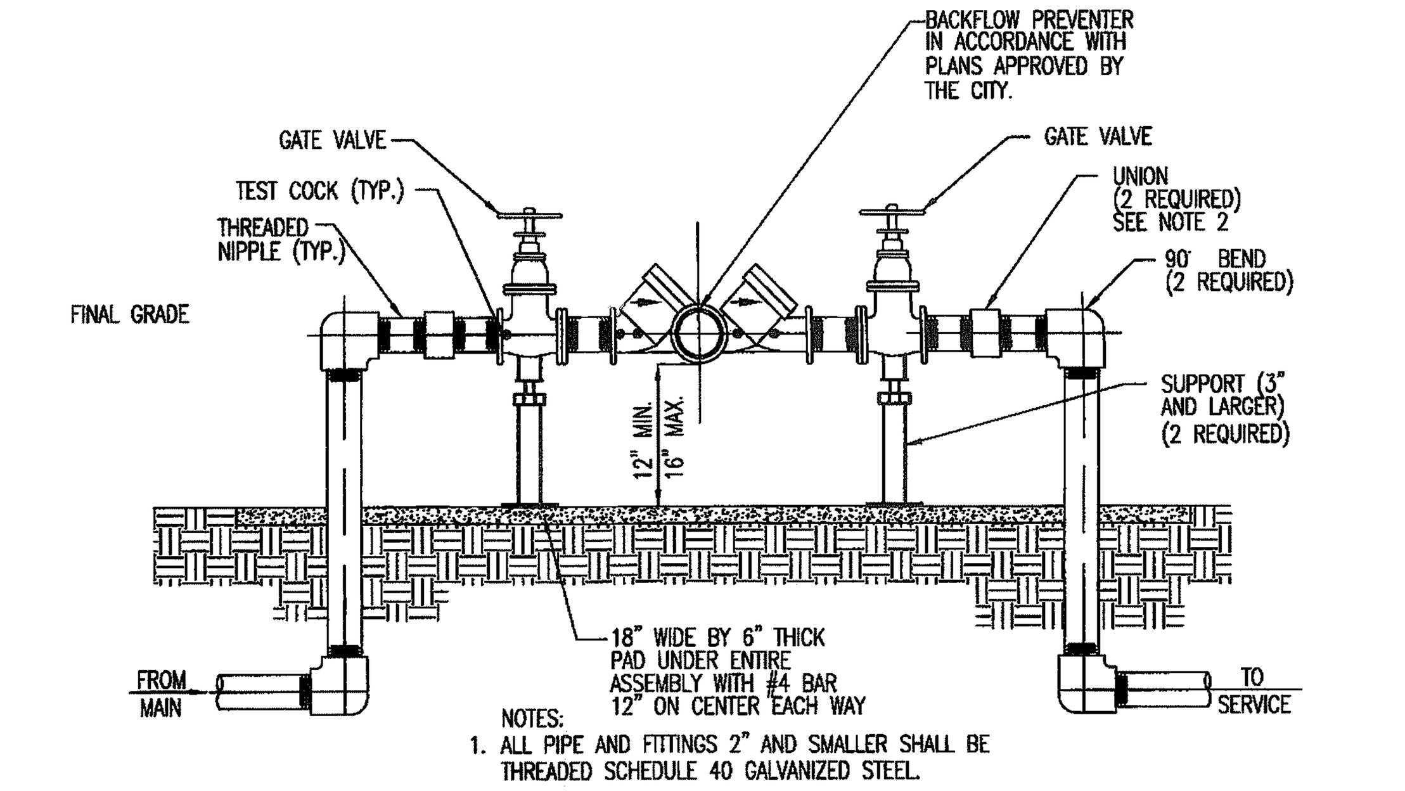
OIL INTERCEPTOR CALCULATIONS

- TOTAL AREA= 1,185 SF
- NON DINNING AREA= 338 SF
- DINNING AREA = 847 SF
- 4 SEATS / TABLE= 100 SF / TABLE (INCLUDES SEAT AREA & WALK AREA)
  847 SF/100 SF= 8.5 TABLES @ 4 SEATS
  34 SEATS
- 34 X 25 X (10/12) X .75= 529 GAL.
  USE 750 GAL INTERCEPTOR



SECTION M-M TYPICAL LANDSCAPE ISLAND SECTION

NTS

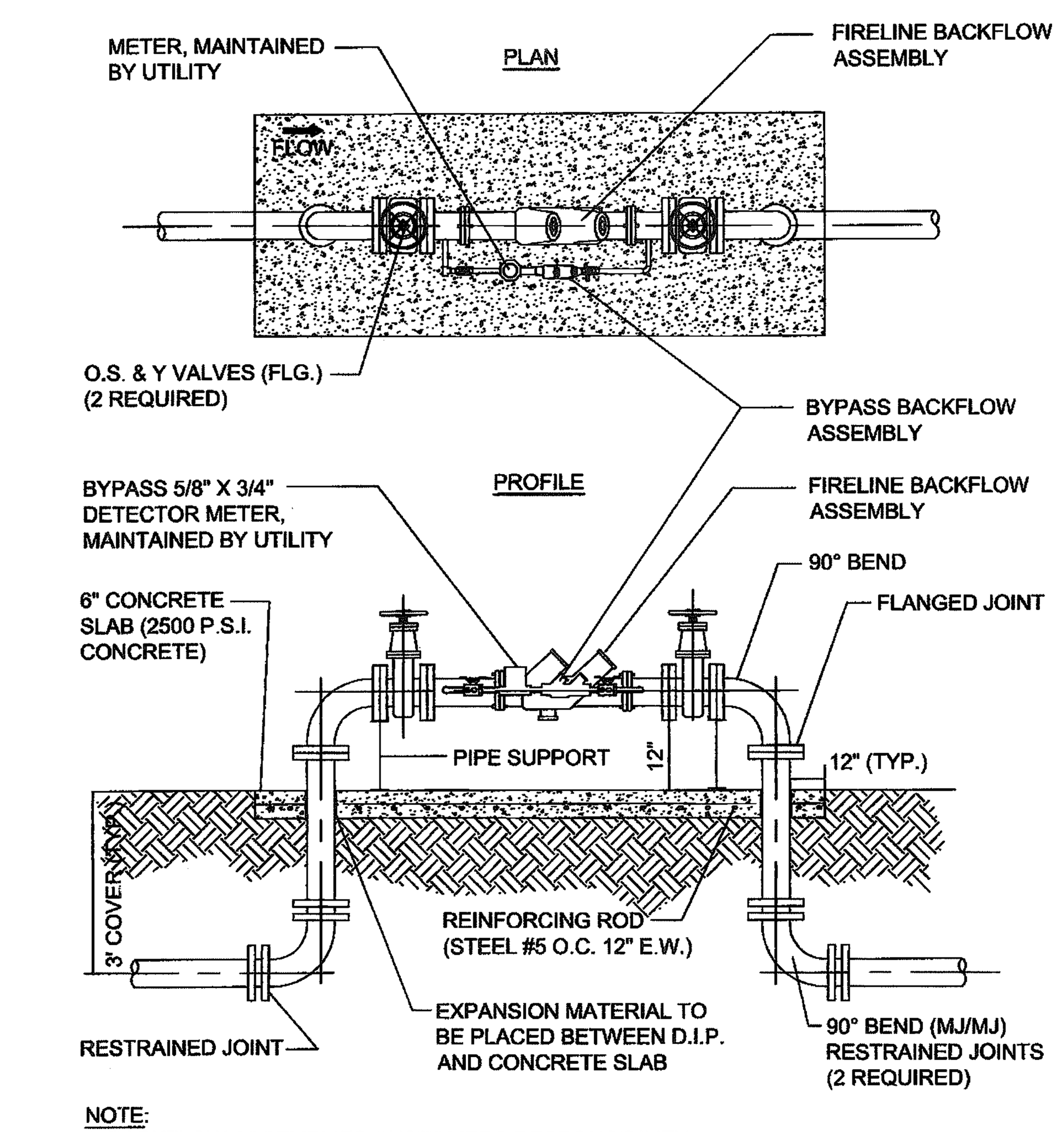


NOTES:
1. ALL PIPE AND FITTINGS 2" AND SMALLER SHALL BE THREADED SCHEDULE 40 GALVANIZED STEEL.

PLAN VIEW

REDUCED PRESSURE BACKFLOW PREVENTER

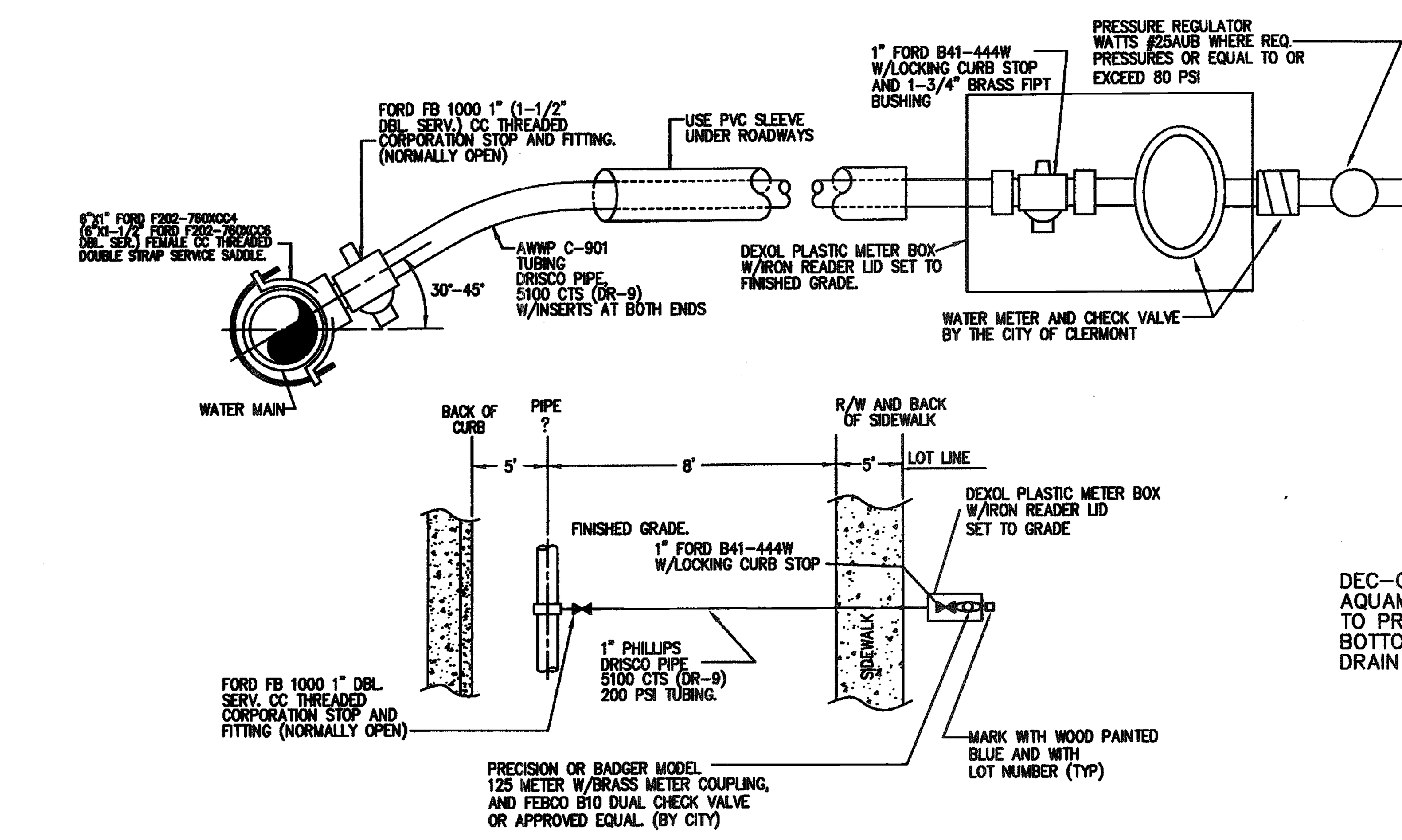
NTS



NOTE:
1. BACKFLOW ASSEMBLIES CUSTOMERS RESPONSIBILITY.

DOUBLE DETECTOR CHECK VALVE ASSEMBLY BACKFLOW PREVENTER

NTS



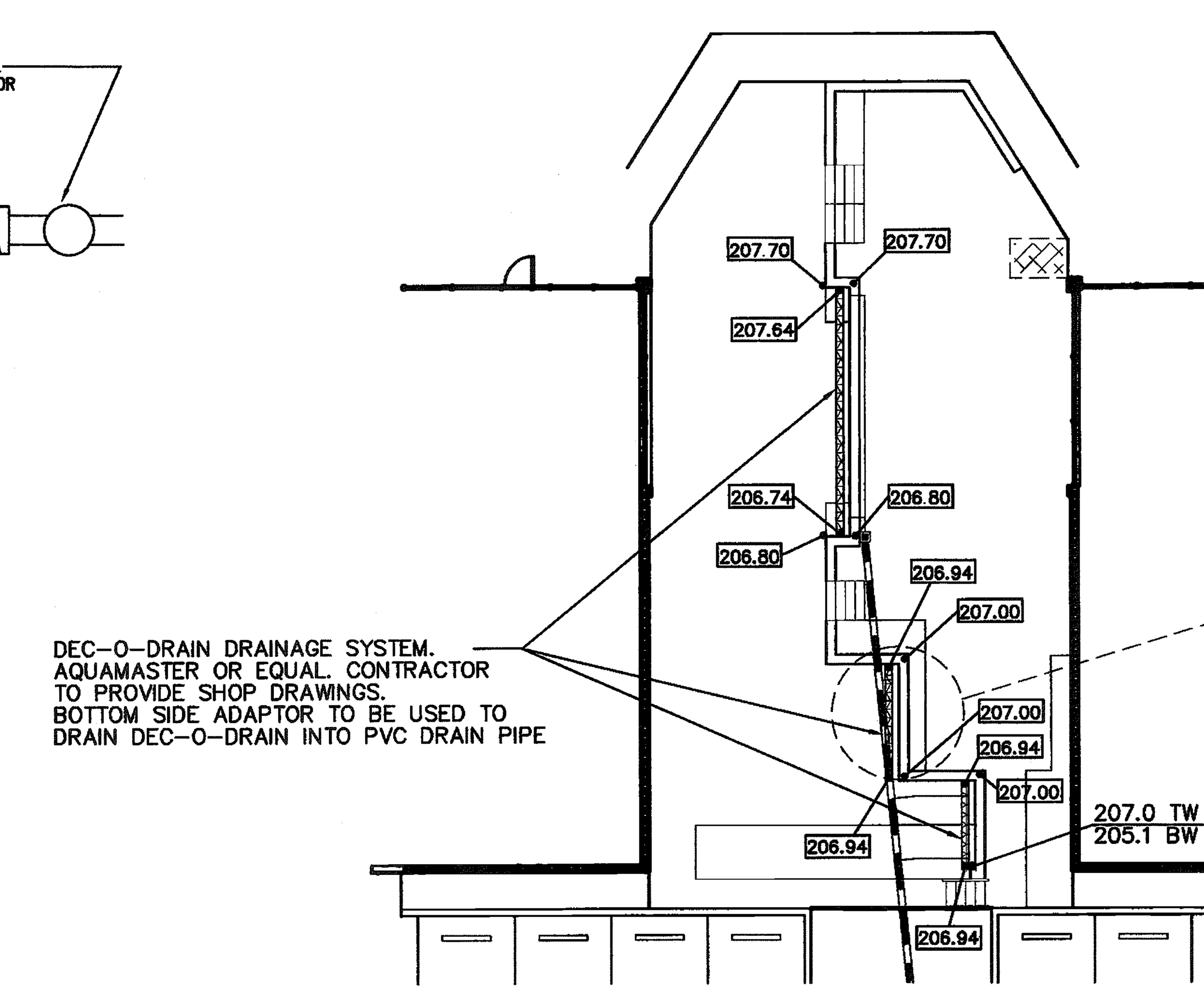
SINGLE SERVICE

WATER SERVICE CONNECTION DETAILS

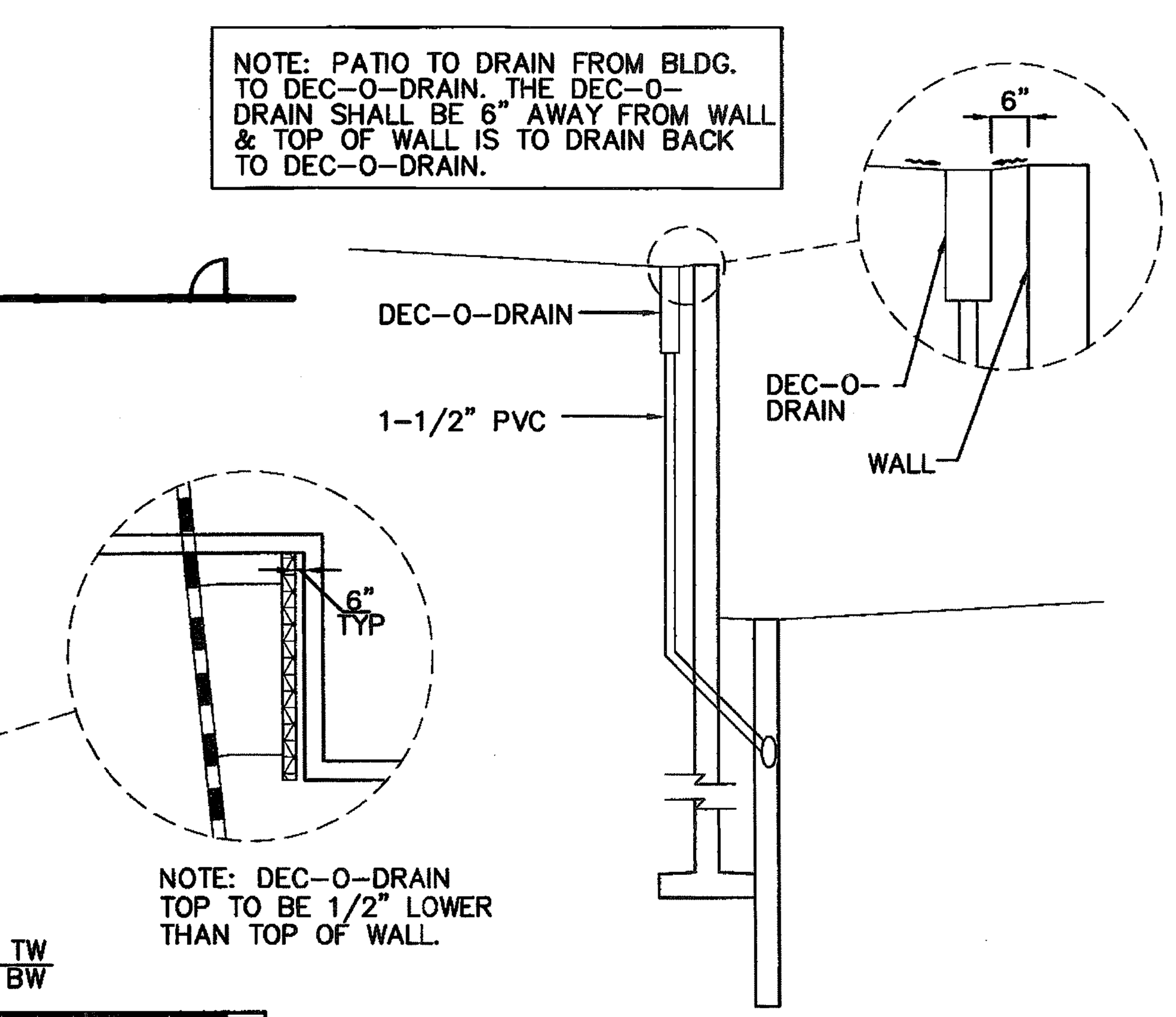
NTS

NOTES:

1. ALL WATER SERVICES AND METER BOXES SHALL BE LOCATED 8' INSIDE THE R/W LINE. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CURB STOP.
2. ALL CLERMONT SERVICE LINES SHALL BE 1" (1-1/2" DBL. SERV.) AWWP C-901 TUBING, DRISCO PIPE, 5100 CTS (DR-9), 200 PSI.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP WHICH SHALL BE CLEARLY MARKED WITH A 2" X 2" X 18" STAKE
4. CURB STOPS SHALL BE 1" FORD B41-444W WITH LOCKWING AND FITTED WITH A 1" MIPT X 3/4" FIPT BRASS BUSHING.
5. ALL WATER SERVICES CROSSING UNDER ROADWAYS TO BE ENCASED IN LARGER SIZE SCHEDULE 40 PVC.
6. EXISTING METER BOXES TO REMAIN, PROVIDE NEW METER BOX FOR NEW SERVICES.
7. MARK CURB "W" WHERE SERVICES ARE LOCATED.
8. PROVIDE TRACER WIRE ALONG SERVICE LINES.
9. SET CURB STOP 8-FEET INSIDE R/W LINE.
10. PROVIDE WYE FOR IRRIGATION METER CONNECTION UNLESS, RECLAIMED PIPING IS PROVIDED. IF WYE IS PROVIDED, DOUBLE SERVICE SHALL BE 2 INCH.



PLAN VIEW



TYPICAL SECTION VIEW

67971-2

DEC-O-DRAIN DRAINAGE SYSTEM LOCATION

NTS

CERT. OF AUTHORIZATION # 7350

AUG 1 1 2006

SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1600 EAST ROBINSON STREET, SUITE 400
ORLANDO, FLORIDA 32803
(407) 898-7858 FAX (407) 898-1488

REVISION | DATE
6 5 4 3 2 1

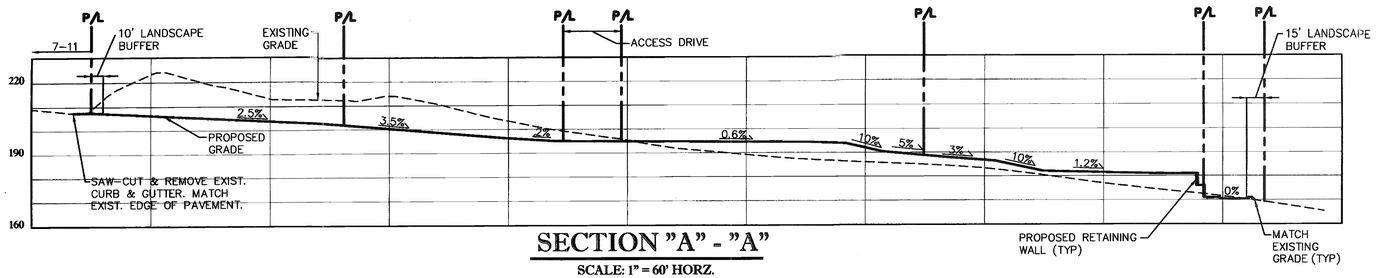
PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

SITE DETAILS

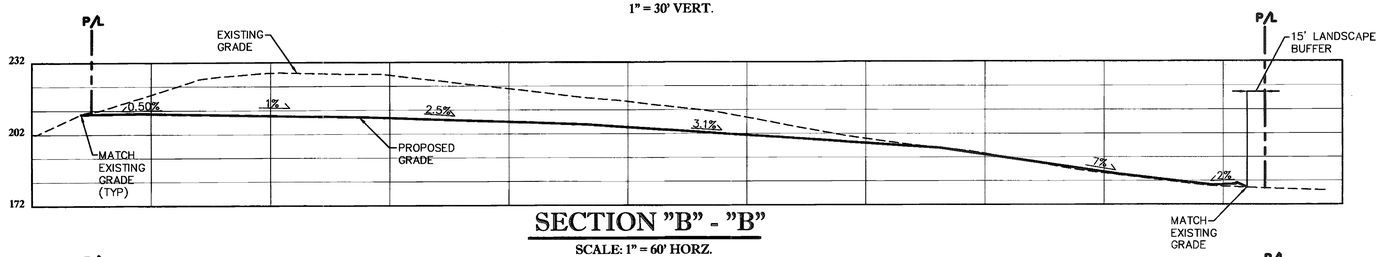
DRAWN: CAG
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET C-10



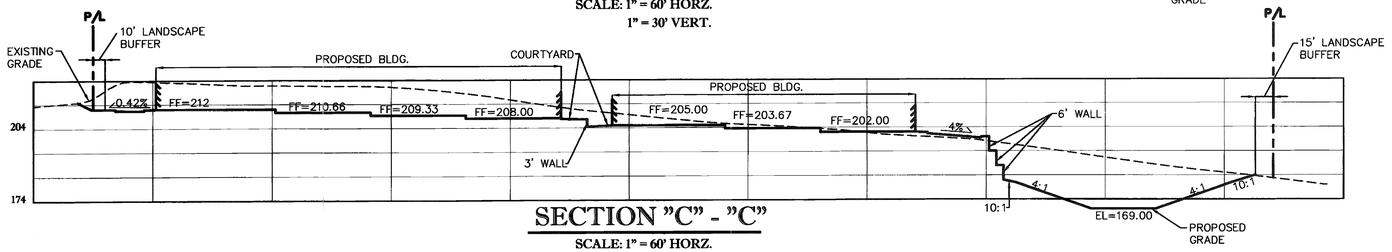
SECTION "A" - "A"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.



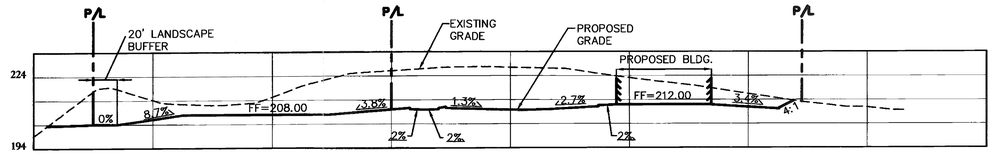
SECTION "B" - "B"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.



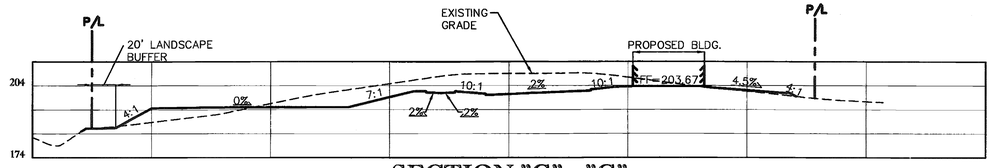
SECTION "C" - "C"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.



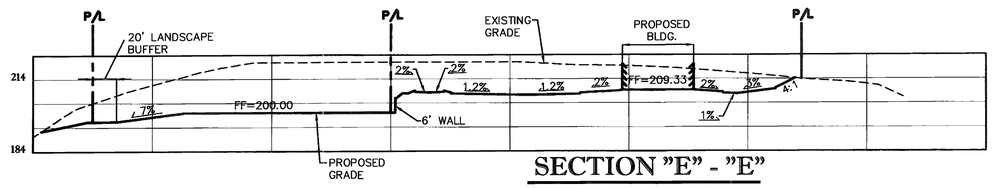
SECTION "D" - "D"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.



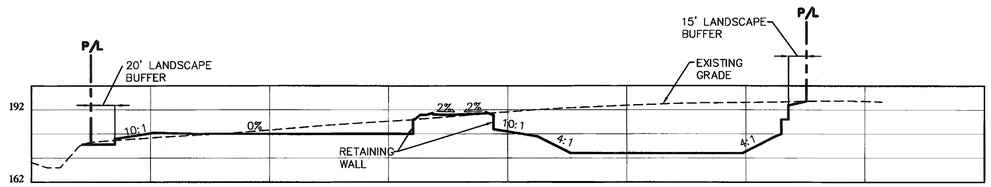
SECTION "G" - "G"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.



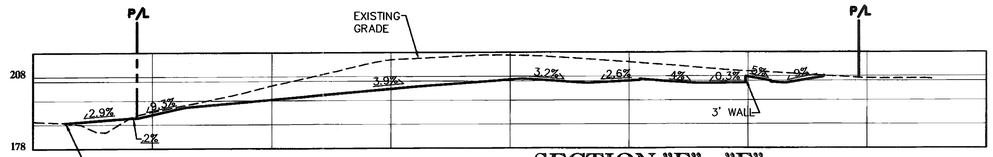
SECTION "E" - "E"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.



SECTION "H" - "H"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.



SECTION "F" - "F"

SCALE: 1" = 60' HORZ.
1" = 30' VERT.

67971-2

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

CERT. OF AUTHORIZATION # 7250
AUG 1 2006
SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 41677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1800 EAST ROBINSON STREET, SUITE 400
ORLANDO, FLORIDA 32803
(407) 898-7858 FAX (407) 898-1488

6	5	4	3	2	1	DATE
						REVISION

PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

SITE CROSS SECTION

DRAWN: CAG
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET
C-11

GENERAL PROJECT DATA

FOR IDENTIFICATION OF CONTRACTUAL AGREEMENTS, THIS SET OF DRAWINGS IS DATED JANUARY 02, 2006. ANY REVISIONS THEREAFTER WILL BE NOTED AND DATED ON THE AFFECTED DRAWING(S).

THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS TO THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANY AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED.

DRAINAGE SYSTEMS

THE CONTRACTOR SHALL PERFORM ALL WORK PERTAINING TO DRAINAGE INCLUDING EXCAVATION OF WRAS PRIOR TO THE COMMENCEMENT OF OTHER WORK INCLUDED IN THESE PLANS. THE DRAINAGE FACILITIES SHALL BE MAINTAINED BY THE CONTRACTOR DURING THE COURSE OF THIS CONTRACT. THE CONTRACTOR SHALL INCLUDE FUNDS IN THE DRAINAGE COSTS OF THE CONTRACT TO OPERATE AND MAINTAIN THE DRAINAGE SYSTEMS DURING THE WORK PROCESS.

THE UTILITIES ARE THE PROPERTY OF THE FOLLOWING:

WATER
CITY OF CLERMONT
UTILITIES DEPARTMENT
685 WEST MONTROSE STREET
CLERMONT, FL 34711
(352) 241-7335
CONTACT: TAMARA RICHARDSON

POWER
PROGRESS ENERGY
P.O. BOX 120069
CLERMONT, FL 34712
(407) 872-1250
CONTACT: SUE FREYSER

POWER
SUMTER ELECTRIC
700 EAST WASHINGTON STREET
ORLANDO, FL 32801
(407) 648-0024

SEWER
CITY OF CLERMONT
UTILITIES DEPARTMENT
685 WEST MONTROSE STREET
CLERMONT, FL 34711
(352) 241-7335
CONTACT: TAMARA RICHARDSON

CABLE
TIME WARNER CABLE
3767 ALL AMERICAN BOULEVARD
ORLANDO, FL
(407) 295-9119

GAS
APOPKA NATURAL GAS
P.O. BOX 771275
WINTER GARDEN, FL
34777-1275
(407) 656-2734

TELEPHONE
SPRINT UNITED
P.O. BOX 490048
LEESBURG, FL 34749-0048
(352) 326-1707

TELEPHONE
AT&T
1-800-222-3000

AS-BUILTS

AS BUILTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER TWO WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEQALED AND DATED BY THE RESPONSIBLE PARTY. SEE INDIVIDUAL SECTIONS (STORM, WATER SYSTEM, ETC.) FOR ADDITIONAL AS-BUILT REQUIREMENTS.

PERMITS AND PERMIT REQUIREMENTS

THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL REGULATORY AND LOCAL AGENCY PERMITS. THE CONTRACTOR SHALL BE EXPECTED TO REVIEW AND ABIDE BY ALL THE REQUIREMENTS AND LIMITATIONS SET FORTH IN THE PERMITS. A COPY OF THE PERMIT SHALL BE KEPT ON THE JOB AT ALL TIMES.

LAYOUT AND CONTROL

UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL PROVIDE FOR THE LAYOUT OF ALL THE WORK TO BE CONSTRUCTED. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPENCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

QUALITY CONTROL TESTING REQUIREMENTS

ALLTESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR, CITY OF CLERMONT, AND THE ENGINEER. TESTING REQUIREMENTS ARE TO BE IN ACCORDANCE WITH THE OWNER/OPERATOR'S SPECIFICATIONS AND REQUIREMENTS. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS. CONTRACTOR SHALL PROVIDE TESTING SERVICES THROUGH A FLORIDA LICENSED GEOTECHNICAL ENGINEERING FIRM ACCEPTABLE TO THE OWNER AND THE ENGINEER. CONTRACTOR TO SUBMIT TESTING FIRM TO OWNER FOR APPROVAL PRIOR TO COMMENCING TESTING.

SHOP DRAWINGS

SHOP DRAWINGS AND CERTIFICATIONS FOR ALL STORM DRAINAGE, WATER SYSTEM, SEWER SYSTEM, AND PAVING SYSTEM MATERIALS AND STRUCTURES ARE REQUIRED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION.

EARTHWORK

EARTHWORK QUANTITIES

THE CONTRACTOR SHALL PERFORM HIS OWN INVESTIGATIONS AND CALCULATIONS AS NECESSARY TO ASSURE HIMSELF OF EARTHWORK QUANTITIES. THERE IS NO IMPLICATION THAT EARTHWORK BALANCES, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY IMPORT FILL NEEDED, OR FOR REMOVAL AND DISPOSAL OF EXCESS MATERIALS.

EROSION CONTROL

EROSION AND SILTRATION CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THESE MEASURES ARE TO BE INSPECTED BY THE CONTRACTOR ON A REGULAR BASIS AND ARE TO BE MAINTAINED OR REPAIRED ON AN IMMEDIATE BASIS AS REQUIRED. REFER TO WATER MANAGEMENT DISTRICT PERMIT FOR ADDITIONAL REQUIREMENTS FOR EROSION CONTROL AND SURFACE DRAINAGE. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED WITH SEED AND MULCH OR SODDED WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION.

WETLAND PROTECTION

THE LIMITS OF THE ON-SITE WETLANDS HAVE BEEN PROVIDED TO THE CONTRACTOR ON THE CONSTRUCTION PLANS OR ON PERMIT MATERIALS. THE WETLANDS ARE TO BE PROTECTED FROM DISTURBANCE AT ALL TIMES. CONTRACTOR SHALL PROVIDE EROSION, SILTATION, AND DIVERSION MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN A COPY OF EACH PERMIT RELATING TO WETLANDS AND WATER MANAGEMENT AND ADHERE TO ALL PROVISIONS AND CONDITIONS THERETO.

LIMITS OF DISTURBANCE

AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. REPAIR OR RECONSTRUCTION OF DAMAGED AREAS ON SURROUNDING PROPERTIES SHALL BE PERFORMED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED. GRADING AND/OR CLEARING ON PROPERTIES OTHER THAN SHOWN ON THE APPROVED PLANS IS PROHIBITED.

TREE REMOVAL

THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHEN ALL WORK IS LAID OUT (SURVEY STAKED), SO THAT A DETERMINATION MAY BE MADE OF SPECIFIC TREES TO BE REMOVED. NO TREES ON THE CONSTRUCTION PLANS AS BEING SAVED SHALL BE REMOVED WITHOUT PERMISSION FROM THE OWNER, ENGINEER AND THE CITY OF CLERMONT.

CLEARING AND GRUBBING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND GRUBBING FOR SITE CONSTRUCTION INCLUDING CLEARING FOR PAVING, UTILITIES, DRAINAGE FACILITIES AND BUILDING CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FIELD STAKED AND REVIEWED BY THE OWNER AND ENGINEER PRIOR TO ANY CONSTRUCTION.

MATERIAL STORAGE/DEBRIS REMOVAL

1) NO COMBUSTIBLE BUILDING MATERIALS MAY BE ACCUMULATED ON THE SITE AND NO CONSTRUCTION WORK INVOLVING COMBUSTIBLE MATERIALS MAY BEGIN UNTIL INSTALLATION OF ALL REQUIRED WATER MAINS AND FIRE HYDRANTS HAVE BEEN COMPLETED, DEP APPROVAL RECEIVED FOR THE WATER MAINS, AND THE HYDRANTS ARE IN OPERATION. CONSTRUCTION WORK INVOLVING NON-COMBUSTIBLE MATERIALS, SUCH AS CONCRETE, MASONARY AND STEEL MAY BEGIN PRIOR TO THE FIRE HYDRANTS BEING OPERATIONAL.

2) ALL MATERIALS EXCAVATED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STOCKPILED AT ON-SITE LOCATIONS AS SPECIFIED BY THE OWNER. MATERIALS SHALL BE STOCKPILED SEPARATELY AS TO USABLE (NONORGANIC) FILL STOCKPILES AND ORGANIC (MUCK) STOCKPILES IF MUCK IS ENCOUNTERED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNSUITABLE FILL MATERIALS FROM THE SITE. ALL CLAY ENCOUNTERED SHALL BE EXCAVATED OUT AND REPLACED WITH CLEAN GRANULAR FILL MATERIALS.

FILL MATERIAL

ALL MATERIALS SHALL CONTAIN NO MUCK, STUMPS, ROOTS, BRUSH, VEGATATIVE MATTER, RUBBISH OR OTHER MATERIAL THAT WILL NOT COMPACT INTO A SUITABLE AND ENDURING BACKFILL. FILL SHALL BE CLEAN, NON-ORGANIC, GRANULAR MATERIAL WITH NOT MORE THAN 10% PASSING THE NO. 200 SIEVE.

COMPACTION

FILL MATERIALS PLACED UNDER ROADWAYS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. ALL OTHER FILL AREAS ARE TO BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. FILL MATERIALS SHALL BE PLACED AND COMPACTED IN A MAXIMUM OF 12" LIFTS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND OWNER WITH ALL (PASSING AND FAILING) TESTING RESULTS. RESULTS SHALL BE PROVIDED ON A TIMELY AND AND REGULAR BASIS PRIOR TO CONTRACTOR'S PAY REQUEST SUBMITTAL FOR THE AFFECTED WORK.

PAVEMENT AND/OR ROAD AND RIGHT-OF-WAY WORK

OWNER/OPERATOR

THE ENTITY THAT WILL OWN, OPERATE AND MAINTAIN THE ROADWAYS SHOWN ON THESE PLANS IS FDOT, LAKE COUNTY OR THE CITY OF CLERMONT. THE CONTRACTOR SHALL BE EXPECTED TO MEET ALL THE REQUIREMENTS OF THAT ENTITY.

GENERAL DESIGN INTENT

ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY IN THE DIRECTION SHOWN BY THE FLOW ARROWS ON THE PLANS AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS INGRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. APPROACHES TO INTERSECTIONS AND ENTRANCE AND EXIT GRADES TO INTERSECTIONS WILL HAVE TO BE STAKED IN THE FIELD AT DIFFERENT GRADES THAN THE CENTERLINE GRADES TO ACCOMPLISH THE PURPOSES OUTLINED. IN ADDITION, THE STANDARD CROWN WILL HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTION TO ACCOMPLISH THE INTENT OF THE PLANS.

MATERIALS/CONSTRUCTION SPECIFICATIONS

MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 1991, OR LATEST EDITION.

PAVEMENT SECTION REQUIREMENTS

CONSTRUCTION OF ROADWAYS SHALL BE 12" OF STABILIZED SUBBASE WITH A LIMEROCK BEARING PATIO OF (LBR) 40 COMPACTED TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY OF 98% PER AASHTO T-180, 6" OF LIMEROCK BASE COURSE, (LBR) 100, COMPACTED TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY OF 98% PER AASHTO T-180 AND 2" TYPE S-111 OF VIRGIN ASPHALTIC CONCRETE SURFACE COURSE WITH A MINIMUM STABILITY OF 1500 LBS. SUBGRADE PREPARATION AND PAVEMENT INSTALLATION SHALL CONFORM TO FDOT STANDARDS AND SOILS REPORT RECOMMENDATIONS.

SIDEWALKS

SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREA AS SHOWN ON THE CONSTRUCTION PLANS. THE 5' SIDEWALK SHALL BE CONSTRUCTED OF 4 INCHES OF CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. JOINTS SHALL BE EITHER TOOLED OR SAWCUT AT A DISTANCE OF 5' LENGTHS, HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND BE IN ACCORDANCE WITH STATE REGULATIONS FOR HANDICAP ACCESSIBILITY.

PAVEMENT MARKINGS/SIGNAGE

PAVEMENT MARKINGS AND SIGNAGE SHALL BE PROVIDED AS SHOWN ON THE CONSTRUCTION PLANS AND SHALL MEET THE REQUIREMENTS OF THE OWNER/OPERATOR. SIGNAGE SHALL BE IN CONFORMANCE WITH MUTCD (LATEST EDITION). A 48-HOUR PAVEMENT CURING TIME WILL BE PROVIDED PRIOR TO APPLICATION OF THE PAVEMENT MARKINGS. REFLECTIVE PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH FDOT INDEX NO. 17352.

TRAFFIC CONTROL

AN MOT PLAN SHALL BE SUBMITTED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK. A MINIMUM OF 2-WAY, ONE LANE TRAFFIC SHALL BE MAINTAINED IN THE WORK SITE AREA. ALL CONSTRUCTION WARNING SIGNAGE SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION AND BE MAINTAINED THROUGHOUT CONSTRUCTION. ACCESS SHALL BE CONTINUOUSLY MAINTAINED FOR ALL PROPERTY OWNERS SURROUNDING THE WORK SITE AREA. LIGHTED WARNING DEVICES ARE TO BE OPERATIONAL PRIOR TO DUSK EACH NIGHT DURING CONSTRUCTION.

CURBING

CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE DEPARTMENT OF TRANSPORTATION CLASS "1" CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1991) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.

R/W RESTORATION

ALL AREAS WITHIN THE RIGHT-OF-WAYS SHALL BE FINISH GRADED WITH A SMOOTH TRANSITION INTO EXISTING GROUND. ALL SWALES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING. ALL DISTURBED AREAS SHALL BE RAKED CLEAN OF ALL LIMEROCK AND ROCKS AND SODDED AFTER FINAL GRADING IN ACCORDANCE WITH THE CONSTRUCTION PLANS PRIOR TO FINAL INSPECTION. ALL GRASSING (SEED OR SOD) SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE OWNER/OPERATOR.

SITE ACCESS

ALL ACCESS TO THE JOB SITE FOR CONSTRUCTION AND RELATED ACTIVITIES SHALL BE BY EXISTING STREETS AND ROADS, OR BY THE CONSTRUCTION EASEMENT AS APPROVED BY THE CITY OF CLERMONT.

POTABLE WATER/FIRE SYSTEMS

OWNER/OPERATOR

THE ENTITY THAT WILL OWN, OPERATE AND MAINTAIN THE WATER SYSTEM SHOWN ON THESE PLANS IS CITY OF CLERMONT. THE CONTRACTOR SHALL BE EXPECTED TO MEET ALL THE REQUIREMENTS OF THAT ENTITY, UNLESS OTHERWISE INDICATED ON PLANS.

PIPE MATERIALS

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL INFRASTRUCTURE TO BE CONSTRUCTED. WATER SYSTEM SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND SHALL MEET CITY SPECIFICATIONS.

POLYVINYL CHLORIDE PLASTIC PIPE (PVC) 4" THROUGH 12" SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C900 (LATEST EDITION) AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI AND A DR (DIMENSION RATIO) OF 18. ALL PVC PIPE SHALL BEAR THE NSF LOGO FOR POTABLE WATER. JOINTS SHALL BE OF THE PUSH-ON TYPE AND COUPLINGS CONFORMING TO ASTM D3139, DR18 PIPE.

DUCTILE IRON PIPE (DIP) SHALL BE STANDARD PRESSURE CLASS 350 IN SIZES 4" THROUGH 12" AND CONFORM TO ANSI/AWWA C150/A21.50 (LATEST EDITION). ALL DUCTILE IRON PIPE SHALL HAVE A STANDARD THICKNESS OF CEMENT MORTAR LINING AS SPECIFIED IN ANSI/AWWA C104/A21.4 (LATEST EDITION). PIPE JOINTS SHALL BE OF THE PUSH-ON RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA C111/A21.11 (LATEST EDITION).

PIPE DETECTOR WITH LOCATOR WIRE SHALL BE INSTALLED ON ALL WATER MAINS PER DETAIL.

PIPE SIZES GREATER THAN 12" IN BOTH PVC AND DUCTILE IRON SHALL BE SEPARATELY SPECIFIED ON THE PLANS; WITH THICKNESS CLASSES TO BE SHOWN BASED ON WORKING PRESSURES, PIPE DEPTH AND TRENCH CONDITIONS.

FITTINGS FOR DUCTILE IRON PIPE AND PVC C-900 PIPE SHALL BE DUCTILE IRON AND SHALL CONFORM TO ANSI/AWWA C153/A21.10 (LATEST EDITION) AND SHALL BE CEMENT LINED IN CONFORMANCE WITH ANSI/AWWA C104/A21.4 (LATEST EDITION).

POLYETHYLENE WRAP USED FOR CORROSION PREVENTION ON DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/ASTM D1248. THE MINIMUM NOMINAL THICKNESS SHALL BE 0.008 IN. (8 MILS). INSTALLATION OF POLY WRAP SHALL BE IN ACCORDANCE WITH AWWA C105.

TRANSMISSION MAIN SHALL BE DIP RATED FOR 250 PSI.

VALVES

GATE VALVES SHALL BE RESILIENT SEAT AND SHALL CONFORM TO ANSI/AWWA C509.87 WITH HANDWHEEL OR WRENCH NUT, EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED. MANUFACTURER'S CERTIFICATION OF THE VALVES COMPLIANCE WITH AWWA SPECIFICATION C509 AND TESTS LISTED THEREIN WILL BE REQUIRED. VALVES SHALL BE CLOW, DRESSER, KENNEDY, AMERICAN.

BUTTERFLY VALVES

BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH TESTING AND PERFORMANCE REQUIREMENTS OF AWWA C504, CLASS 150. VALVES SHALL BE DUCTILE IRON, RESILIENT SEAT, AND BE MANUFACTURED BY KENNEDY, MUELLER, M&H, AMERICAN. BUTTERFLY VALVES TO BE USED FOR SIZES GREATER THAN 12".

AIR RELEASE VALVES

AIR RELEASE VALVES SHALL BE PLACED AT HIGH POINTS OF THE TRANSMISSION MAIN TO PERMIT ESCAPE OF TRAPPED AIR. THE VALVE SIZE, LOCATION AND METHOD OF INSTALLATION SHALL BE INDICATED ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER. AIR RELEASE VALVES SHALL BE CRISP IN PRESSURE AIR VALVE TYPE N, APCO OR VALVE & PRIMER CORP.

VALVE BOXES

VALVE BOXES ON BURIED POTABLE WATER MAINS SHALL BE ADJUSTABLE, CAST IRON CONSTRUCTION, WITH MINIMUM INTERIOR DIAMETEROF 5" WITH COVERS CAST WITH THE INSCRIPTION IN LEGIBLE LETTERING ON TOP: WATER. BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE, AND SHALL BE MANUFACTURED BY MUELLER COMPANY, MODEL 10364, OR APPROVED EQUAL. VALVE BOX PADS SHALL BE 18"x18"x4" THICK CONCRETE WITH #4 REINFORCING BARS. PAD TO BE SET AT FINISHED GRADE WITH RECESSED DETECTOR WIRE CONDUIT PORT PER DETAIL.

WATER SERVICES

UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS. CONTRACTOR SHALL CONSTRUCT WATER SERVICE THROUGH THE CURB STOP AND SET METER BOXES TO FINISHED GRADE AS SHOWN ON THE WATER SYSTEM DETAIL SHEET.

POLYETHYLENE (PE) PRESSURE PIPE FOR WATER SERVICES 1/2" THROUGH 3" SHALL CONFORM TO AWWA C901.88, MIN. 200 PSI. AND SHALL BE PHILLIPS DRISCO CTS 5100 (DR-9) ASTM D-2737, 200 PSI.

POLYETHYLENE (PE) PRESSURE PIPE FOR WATER SERVICES 1/2" THROUGH 3" SHALL CONFORM TO AWWA C901.88, MIN. 200 PSI. AND SHALL BE PHILLIPS DRISCO CTS 5100 (DR-9) ASTM D-2737, 200 PSI.

ALL SERVICES SHALL INCLUDE THE FOLLOWING: LOCKING CURB STOPS, WYE BRANCHES, UNIONS AS REQUIRED, PE SERVICE PIPE AND CORPORATION STOPS. THE SERVICE SHALL BE COMPLETE THROUGH THE CURB STOP AS SHOWN ON THE DETAIL SHEET, AND SHALL BE OF THE TYPE REQUIRED FOR COMPATIBILITY WITH THE SERVICE LINES SPECIFIED, AND FITTINGS SHALL BE MANUFACTURED BY FORD.

MATERIALS AS REQUIRED BY THE CITY OF CLERMONT

SERVICE SADDLE – FORD F202
CORPORATION STOP – FORD FB1000
CURB STOP – FORD B41-444W FOR 1" ONLY
 – FORD BF43-777W FOR 1-1/2"
 – FORD BF43-777W FOR 2"
METER BOX – SINGLE ONLY (NO DOUBLE METER BOXES ALLOWED), DEXOL WITH IRON READER DOOR WITH TOUCH READ LID. METER BOXES FOR 1-1/2" AND 2" SHALL BE CDR 17"x30" WITH TOUCH READ LID. METER BOXES IN TRAFFIC AREAS SHALL BE BROOKS 36 SERIES WITH TOUCH READ LID.
COMPOUND Y BRANCH – FORD Y44
JOINT RESTRAINT – MEGA LUG
INSTALL OR PROVIDE CITY WITH 1"x 3/4" BRASS BUSHING AT METER DISCHARGE CONNECTION.
THE CONTRACTOR SHALL CUT A "W" IN THE CURB TOP AT EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT. SEE WATER SYSTEM DETAILS FOR OTHER SERVICE LOCATION AND MARKING REQUIREMENTS.

PIPE INSTALLATION

PIPE INSTALLATION OF PVC WATER MAIN SHALL BE IN CONFORMANCE WITH ASTM D2774 (LATEST EDITION). INSTALLATION OF DUCTILE IRON PIPE WATER MAIN SHALL BE IN CONFORMANCE WITH AWWA C600.87.

COMPACTED BACKFILL SHALL BE TO 98% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNDER ALL PAVEMENTS WITH 12" MAXIMUM LIFT THICKNESS. OTHER COMPACTION OF BACKFILL SHALL BE TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 WITH 12" MAXIMUM LIFT THICKNESS. SEE PIPE TRENCHING DETAILS.

MINIMUM COVER OVER ALL PIPE SHALL BE 36" FROM TOP OF PIPE TO FINISHED GRADE. SEE PLAN AND PROFILE SHEETS FOR REQUIRED DEPTH.

WATER MAINS ARE TO BE INSTALLED SO AS TO PROVIDE A MINIMUM VERTICAL CLEARANCE OF 18" OR A MINIMUM HORIZONTAL CLEARANCE OF 10 FEET FROM ALL SANITARY HAZARDS, INCLUDING STORM DRAINAGE PIPES AND STRUCTURES, AS WELL AS SEPTIC TANKS, DRAIN FIELDS AND SEWER PIPING. IF CLEARANCE CAN NOT BE ACHIEVED, THEN DUCTILE IRON WATER MAIN SHALL BE PROVIDED 10 FEET EITHER SIDE OF THE CROSSING.

ALL WATER MAINS SHALL BE INSTALLED WITH RESTRAINED JOINT FITTINGS. NO CONCRETE THRUST BLOCKS TO BE USED.

ALL PLUGS, CAPS, TEES, BENDS, FIRE HYDRANTS, VALVES, ETC. SHALL BE PROVIDED WITH MEGALUG PIPE RESTRAINTS. FOR RESTRAINT CONSTRUCTION SPECIFICATIONS, REFER TO THE WATER SYSTEM DETAILS.

PIPE IDENTIFICATION

BLUE INDICATOR TAPE SHALL BE BURIED IN THE WATER MAIN TRENCH 18" DIRECTLY ABOVE THE WATER MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE WATER DETAIL SHEET.

ALL PIPE AND PIPE FITTINGS SHALL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUB-PARAGRAPH 62-555.320(21)(b)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE, SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE SHALL BE PAINTED BLUE OR SHALL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.)

DISINFECTION AND TESTING

ALL PIPE SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.86.

ALLOWABLE LEAKAGE FOR PVC PRESSURE MAINS WILL BE IN ACCORDANCE WITH AWWA M23.

THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GUAGES AND OTHER EQUIMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC AND LEAKAGE TESTING. CONTRACTOR SHALL CONTACT THE ENGINEER, OWNER/OPERATOR AND CITY IN WRITTEN FORM, FORTY EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION.

THE WATER SYSTEM SHALL BE SOAK TESTED 24 HOURS @150 PSI AND TESTED FOR LEAKAGE AT 150 PSI FOR TWO (2) HOURS, WITH ALLOWABLE LEAKAGE IN ACCORDANCE WITH ABOVE STANDARDS.

CONTRACTOR SHALL OBTAIN A COPY OF THE FEDP WATER SYSTEM PERMIT AND PULL BACTERIOLOGICAL TEST SAMPLES FROM THE SAMPLE POINTS SPECIFIED IN THAT PERMIT. CONTINUITY TEST SHALL BE PERFORMED ON WIRE BY CONTRACTOR.

CONNECTIONS TO EXISTING WATER MAINS

PRIOR TO THE CONNECTION TO ANY EXISTING MAIN, THE PROPOSED WATER MAIN SHALL BE DISINFECTED, HAVE ENGINEER APPROVED PRESSURE TESTING AND HAVE FDEP CLEARANCE. REFER TO FDEP PERMIT FOR ANY ADDITIONAL REQUIREMENTS.

AS BUILT DRAWINGS

THE CONTRACTOR SHALL PROVIDE VERTICAL AND HORIZONTAL "AS-BUILT" INFORMATION RELATIVE TO ALL CONSTRUCTED UTILITIES AND STRUCTURES. THREE SETS SHALL BE PROVIDED FOR REVIEW. ONCE APPROVED BY THE UTILITY, ONE REPRODUCIBLE SET SHALL BE PROVIDED.

AS-BUILT INFORMATION FOR THE WATER SYSTEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

1. LOCATION OF ALL VALVES, FITTINGS, HYDRANTS AND SERVICES – HORIZONTAL AND VERTICAL.
2. LOCATION OF THE WATER MAIN TIED WITH COORDINATES FOR THE SUBDIVISION.
3. CERTIFICATION AS TO THE SYSTEM MEETING THE MINIMUM COVER REQUIREMENTS.
4. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION WHICH DEVIATES FROM THE APPROVED ENGINEERING PLANS.
5. UTILITY LOCATES ON SYSTEMS INSTALLED UNDER THIS CONTRACT SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER UNTIL AS-BUILT DRAWINGS ARE REVIEWED AND APPROVED BY THE UTILITY.

SANITARY SEWER NOTES

MAINS AND MANHOLES

1. ALL GRAVITY SANITARY SEWER MAINS SHALL BE CONSTRUCTED OF DR35 PVC PIPE MEETING ASTM 3034, AND SHALL HAVE A MINIMUM COVER OF THREE (3) FEET.
2. WHERE REQUIRED, MAINS SHALL BE CLASS 50 DUCTILE IRON PIPE (DIP) MEETING AWWA C150 AND C151. MAINS SHALL BE 60 MIL EPOXY COATED WITH POLYETHYLENE WRAP CONFORMING TO AWWA C105.
3. MAINS AND LATERALS WITH LESS THAN THREE (3) FEET OF COVER SHALL BE CLASS 50 DIP.
4. ALL PVC PIPE SHALL BEAR THE NSF-DW SEAL.
5. JOINTS SHALL BE INTEGRAL BELL ELASTOMERIC GASKET JOINTS MANUFACTURED IN ACCORDANCE WITH ASTM D3212 AND ASTM F477. APPLICABLE UNI-BELL PLASTIC PIPE ASSOCIATION STANDARD IS UNI-B-7.
6. ALL SANITARY MANHOLES SHALL BE PRECAST CONCRETE WITH A MINIMUM WALL THICKNESS OF FIVE (5) INCHES FOR INSIDE DIAMETER OF FOUR (4) FEET.
7. MANHOLES SHALL MEET ASTM C-478. RING AND COVER SHALL BE TRAFFIC BEARING H-20 CLASS 30 MEETING ASTM A-48.
8. INTERIOR AND EXTERIOR WALLS OF ALL MANHOLES SHALL HAVE A MINIMUM OF TWO (2) 8 MIL COATS OF AN APPROVED PROTECTIVE COAL TAR EPOXY.
9. ALL MAINS NOT LOCATED UNDER PAVEMENT SHALL BE MARKED BY A THREE (3) INCH WIDE METALLIC LOCATOR TYPE 18" ABOVE THE CENTERLINE OF PIPE. DROP MANHOLE IF INVERT DIFFERENCE IS GREATER THAN OR EQUAL TO TWO (2) FEET.

LATERALS

1. ALL SERVICE LATERALS AND FITTINGS SHALL BE A MINIMUM OF 6" IN DIAMETER.
2. ALL LATERALS SHALL TERMINATE WITH A 4" CLEAN-OUT AT THE PROPERTY LINE, AND AT A DEPTH TO FINAL GRADE OF 3 FEET. SEE DETAILS FOR LOCATION.
3. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2"x2"x2" ABOVE GRADE WOODEN STAKE OR APPROVED MARKER AND CURB MARKED WITH A '5'.

FORCEMAINS

1. FORCEMAINS SHALL BE DR18 PVC PIPE CONFORMING TO AWWA C-900, OR 60 MIL EPOXY COATED CLASS 50 DIP. PVC PIPE SHALL HAVE INTEGRAL BELL PUSH ON TYPE JOINTS CONFORMING TO ASTM D3139.
2. ALL FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON WITH 250 PSI MINIMUM PRESSURE RATING. SUITABLE COUPLINGS COMPLYING WITH ASTM SPECIFICATIONS ARE REQUIRED FOR JOINING DISSIMILAR MATERIALS.
3. METALLIC MARKING TAPE SHALL BE PLACED OVER THE MAIN AT A MAXIMUM DEPTH OF TWO (2) FEET BELOW THE SURFACE AND TIED INTO ALL VALVE BOXES. TESTING FOR CONTINUITY WILL BE REQUIRED.
4. ALL MAINS SHALL HAVE A MINIMUM COVER OF THREE (3) FEET.
5. ALL CONNECTIONS TO EXISTING SEWER FORCEMAINS SHALL BE ACCOMPLISHED WITH A WET TAP AND RESTRAINTS.
6. PROVIDE JOINT RESTRAINT AS SHOWN ON THE WATER DETAIL SHEET.
7. AIR RELEASE AND VACUUM VALVES MANUFACTURER SHALL BE APPROVED BY THE CITY.

TESTING

1. SEWAGE COLLECTION SYSTEM
   A. ALL GRAVITY SEWER MAINS REQUIRE LOW PRESSURE AIR TESTING IN ACCORDANCE WITH THE LATEST UNI-BELL STANDARD FOR LOW PRESSURE AIR TESTS. AIR TESTS, AS A MINIMUM, SHALL CONFORM TO THE TEST PROCEEDURES DESRIBED IN ASTM SPECIFICATIONS, ASTM F1417 FOR PLASTIC PIPE.
   B. ALL SEWER MAINS SHALL BE LAMPED BY A CITY REPRESENTATIVE.
   C. ALL MANHOLES SHALL BE INSPECTED FOR INFILTRATION, ALIGNMENT, FLOW CHANNEL CONSTRUCTION AND COAL TAR EPOXY PAINT THROUGHOUT.
   D. HYDRO-STATIC TESTS CONSISTING OF A HYDROSTATIC PRESSURE TEST AND HYDROSTATIC LEAKAGE TEST SHALL BE CONDUCTED ON ALL NEWLY INSTALLED SEWER FORCE MAIN SYSTEM PRESSURE PIPES AND APPURTENANCES IN ACCORDANCE WITH AWWA C600 OR M23 AS APPLICABLE. THE PRESSURE SHALL BE 100 PSI FOR TWO (2) HOURS.
   E. DEFLECTION TESTS ARE REQUIRED FOR ALL FLEXIBLE PIPE. TESTS SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

TEMPORARY JUMPER CONNECTION NOTES

A TEMPORARY JUMPER CONNECTION IS REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE WATER MAINS AND PROPOSED NEW WATER MAIN IMPROVEMENTS.

THE DETAIL PROVIDED IS TO BE USED FOR FILLING ANY NEW WATER MAIN OF ANY SIZE FROM EXISTING ACTIVE WATER MAINS AND FOR FLUSHING OF NEW MAINS UP TO 8" DIAMETER (2.5 FPS MINIMUM VELOCITY) AND FOR TAKING BACTERIOLOGICAL SAMPLES FROM ANY NEW WATER MAIN OF ANY SIZE. THE JUMPER CONNECTION SHALL BE MAINTAINED UNTIL AFTER FILLING, FLUSHING, TESTING AND DISINFECTING OF THE NEW MAIN HAS BEEN SUCCESSFULLY COMPLETED AND CLEARANCE FOR USE HAS BEEN OBTAINED FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AND OTHER PERTINENT AGENCIES HAS BEEN RECEIVED BY THE CITY OF CLERMONT. THIS JUMPER CONNECTION SHALL ALSO BE USED TO MAINTAIN A MINIMUM LEVEL OF DISINFECTION AND UNTIL THE FDEP CLEARANCE LETTER IS OBTAINED AND THE LINES ARE PLACED INTO SERVICE.

ADEQUATE RESTRAINTS SHALL BE PROVIDED TEMPORARILY, AS REQUIRED.

PIPE AND FITTINGS USED FOR CONNECTING THE NEW PIPE TO THE EXISTING PIPE SHALL BE DISINFECTED PRIOR TO INSTALLATION IN ACCORDANCE WITH AWWA C651, 1992 EDITION. THE TAPPING SLEEVE AND THE EXTERIOR OF THE MAIN TO BE TAPPED SHALL BE DISINFECTED BY SPRAYING OR SWABBING PER SECTION II OF AWWA C651-92.

FLUSHING OF 10" DIAMETER AND LARGER WATER MAINS MAY BE DONE THROUGH THE TIE-IN VALVE UNDER CONTROLLED CONDITIONS BY THE CITY ONLY. THE FOLLOWING PROCEEDURES SHALL BE FOLLOWED:

A. THE TIE-IN VALVES SHALL BE OPERATED ONLY BY THE CITY AND PRESSURE TESTED IN THE PRESENCE OF THE CITY AND ENGINEER TO VERIFY WATER TIGHTNESS PRIOR TO TIE-IN. VALVES WHICH ARE NOT WATER-TIGHT SHALL BE REPLACED OR A NEW VALVE INSTALLED IMMEDIATELY ADJACENT TO THE LEAKING VALVE.

B. THE TEMPORARY JUMPER CONNECTION SHALL BE CONSTRUCTED AS DETAILED. THE JUMPER CONNECTION SHALL BE USED TO FILL THE NEW WATER MAIN, FOR PROVIDING WATER FOR BACTERIOLOGICAL SAMPLING OF THE NEW MAIN AS REQUIRED BY THE FDEP PERMIT AND FOR MAINTAINING CHLORINE RESIDUALS IN THE MAINS.

   1. FLUSHING SHALL NOT BE ATTEMPTED DURING PEAK DEMAND HOURS OF THE EXISTING WATER MAIN.
   2. ALL DOWNSTREAM VALVES IN THE NEW SYSTEM MUST BE OPEN PRIOR TO THE CITY OPENING THE TIE-IN VALVE.
   3. PROVIDE FOR AND MONITOR THE PRESSURE AT THE TIE-IN POINT. THE PRESSURE IN THE EXISTING MAIN MUST NOT DROP BELOW 35 PSI.
   4. TIE-IN VALVE SHALL BE OPENED BY THE CITY A FEW TURNS ONLY, ENSURING A PRESSURE DROP ACROSS THE VALVE IS ALWAYS GREATER THAN 10 PSI.

C. THE TIE-IN VALVE SHALL BE LOCKED CLOSED BY THE CITY UNTIL THE FLUSHING BEGINS.

D. THE TIE-IN VALVE SHALL BE OPENED ONLY BY THE CITY FOR FLUSHING OF THE NEW MAIN. THE PROCEEDURE SHALL BE DONE BY THE CITY AND OBSERVED BY THE ENGINEER.

E. AFTER FLUSHING, THE TIE-IN VALVE SHALL BE CLOSED AND LOCKED IN THE CLOSE POSITION BY THE CITY.

THE CONTRACTOR SHALL PROVIDE DOCUMENTATION DEMONSTRATING THAT THE RPZ BACK FLOW PREVENTION DEVICE HAS BEEN TESTED WITHIN ONE YEAR AT THE TIME OF INSTALLATION, AND IS IN GOOD WORKING ORDER AT THE TIME OF INSTALLATION. THE TEST SHALL BE PERFORMED BY A CERTIFIED BACK FLOW PREVENTION TECHNICIAN AS APPROVED BY THE CITY OF CLERMONT CROSS-CONNECTION CONTROL PROGRAM. A CERTIFICATE IS REQUIRED BY THE CITY.

EXCEPT AS REQUIRED TO FLUSH LINES OF GREATER THAN 8" IN DIAMETER, THE TIE-IN VALVE SHALL REMAIN CLOSED AND SHALL BE LOCKED IN THE CLOSE POSITION BY THE CITY. THE TIE-IN VALVE SHALL REMAIN LOCKED CLOSED UNTIL THE NEW SYSTEM HAS BEEN CLEARED FOR USE BY FDEP AND ALL OTHER AGENCIES. UPON RECEIPT OF CLEARANCE FOR USE FROM FDEP AND ALL OTHER AGENCIES, THE CONTRACTOR SHALL REMOVE THE TEMPORARY JUMPER CONNECTION. THE CORPORATION STOPS ARE TO BE CLOSED AND PLUGGED WITH 2" BRASS PLUGS. THERE SHALL BE NO LEAKAGE.

ALL INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER CONNECTION AND ASSOCIATED BACK FLOW PREVENTION DEVICE, FITTINGS, VALVES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

WATER METERS SHALL BE PAID FOR AT THE CITY HALL AND SHALL BE DELIVERED TO THE JOB SITE BY THE PUBLIC WORKS DEPARTMENT.

GENERAL NOTES LAST REVISED
02-14-05

67971-2

CERT. OF AUTHORIZATION # 7350
AUG 14 2006
SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY,
COLLINS &
GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

6	
5	
4	
3	
2	
1	
	DATE

PREPARED FOR:
TRYCON
ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

CITY OF
CLERMONT
GENERAL NOTES

DRAWN: CAG
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET
C-12

FIRE HYDRANTS

FIRE HYDRANTS SHALL CONFORM TO THE LATEST EDITION OF AWWA C502.85 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE REQUIRED. ALL HYDRANTS SHALL BE BREAKAWAY TYPE, WITH THE BREAKAWAY SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO, TWO AND ONE-HALF INCH (2-1/2") HOSE CONNECTIONS, AND ONE, FOUR AND ONE-HALF INCH (4-1/2") STEAMER CONNECTION WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE-QUARTER INCH (5-1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE-HALF INCH (1-1/2") PENTAGON OPERATING NUT. SHALL OPEN COUNTERCLOCKWISE, SHALL BE PAINTED IN CONFORMANCE WITH CITY OF CLERMONT REQUIREMENTS (COLORS BASED ON DELIVERED FIRE FLOW) WITH THE PRIMER AND FINISH PAINT BEING SHERWIN WILLIAMS OSHA SAFETY COLOR ENAMEL PAINT. HYDRANTS SHALL BE MUELLER CENTRON (TRAFFIC MODEL A-423) NO SUBSTITUTE. FIRE HYDRANTS TO BE THE BREAK AWAY TYPE WITH A CAST IRON DUCTILE IRON MECHANICAL JOINT HYDRANT TEE, WITH RESILIENT SEAT AND MECHANICAL JOINT GATE VALVE.

1. BLUE PAVEMENT REFLECTORS SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE CLOSEST TO AND DIRECTLY IN FRONT OF EACH FIRE HYDRANT.

2. A POST-CONSTRUCTION FIRE FLOW TEST SHALL BE CONDUCTED. HYDRANTS SHALL DELIVER THE REQUIRED GPM PER THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS WITH A RESIDUAL PRESSURE OF 20 PSI. CONTRACTOR SHALL NOTIFY CITY OF CLERMONT ENGINEERING DEPARTMENT WHEN HYDRANTS ARE READY TO BE FLOW TESTED. FOR FIRE HYDRANTS LOCATED WITHIN THE CITY OF CLERMONT, CONNECTED TO THE CITY OF CLERMONT'S WATER SYSTEM, AND/OR LOCATED WITHIN CLERMONT FIRE DEPARTMENT'S PROTECTION AREA, THIS TEST SHALL BE CONDUCTED BY CITY OF CLERMONT FIRE DEPARTMENT PERSONNEL. THIS TEST SHALL BE PROVIDED BY THE CONTRACTOR FOR LOCATIONS NOT INCLUDED ABOVE. THIS TEST MAY BE WITNESSED BY THE OWNER/OPERATOR IF REQUESTED AT TIME OF NOTIFICATION THAT HYDRANTS ARE READY FOR FLOW TEST.

3. IF A PERMIT FOR THE WATER SYSTEM IS REQUIRED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP), THE SYSTEM SHALL BE ACCEPTED AND APPROVED BY DEP PRIOR TO BEING PRESSURIZED OFF OF THE CITY SYSTEM AND PRIOR TO ANY FLOW TESTS BEING CONDUCTED.

4. FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES SHALL BE KEPT ACCESSIBLE TO THE FIRE DEPARTMENT AT ALL TIMES. THE FOLLOWING CLEARANCES SHALL BE MAINTAINED FOR ALL FIRE HYDRANTS AND FIRE PROTECTION APPLIANCES. CLEARANCE OF SEVEN AND ONE-HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF A FIRE HYDRANT, WITH A FOUR FOOT (4') CLEARANCE TO THE REAR OF THE HYDRANT. CLEARANCES OF SEVEN AND ONE-HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF THE APPLIANCES. NO PERSON SHALL PLACE OR KEEP ANY POST, FENCE, VEHICLE, GROWTH, VEGETATION, TRASH OR STORAGE OF OTHER MATERIALS THAT WOULD OBSTRUCT A FIRE HYDRANT OR FIRE PROTECTION APPLIANCE AND HINDER OR PREVENT ITS IMMEDIATE USE BY FIRE DEPARTMENT PERSONNEL. SUCH FIRE HYDRANT OR FIRE PROTECTION APPLIANCE SHALL BE KEPT READILY VISIBLE AT ALL TIMES.

5. FIRE HYDRANTS SHALL NOT BE LOCATED CLOSER THAN THREE (3) FEET TO OR MORE THAN TWENTY (20) FEET FROM THE EDGE OF A STREET, DRIVE OR OTHER ACCESSWAY. UNLESS OTHERWISE RE-QUESTED BY THE FIRE OFFICIAL, THE 4-1/2" CONNECTION SHALL FACE THE NEAREST ROADWAY, OR IF LOCATED WITHIN A COMPLEX PARKING AREA, SHALL FACE THE NEAREST TRAFFIC WAY. NO HYDRANT SHALL BE INSTALLED WHERE PEDESTRIAN OR VEHICULAR TRAFFIC WOULD INTERFERE WITH THE USE OF THE HYDRANT. THE STANDARD FIRE HYDRANT APPROVED FOR USE IN THE CITY IS MUELLER MODEL A-423. THE CITY'S STANDARD FIRE HYDRANT DETAIL AND NOTES ARE AVAILABLE FROM THE CITY ENGINEER'S OFFICE AND MUST BE INCLUDED IN THE SITE PLANS. ALL FIRE HYDRANTS AND MAINS, INCLUDING THOSE PRIVATELY OWNED, THAT ARE CONNECTED TO THE CITY'S POTABLE WATER SYSTEM, SHALL CONFORM TO CITY STANDARDS.

6. A MINIMUM NUMBER OF FIRE HYDRANTS SHALL BE PROVIDED AND/OR AVAILABLE TO PROVIDE EQUAL TO OR GREATER THAN THE NEEDED FIRE FLOW FOR ALL BUILDINGS ON THE SITE BASED ON THE FOLLOWING CREDITS: HYDRANT(S) WITHIN 300 FEET OF THE BUILDING, 1,000 GPM CREDIT; HYDRANT(S) 301 TO 600 FEET, 670 GPM CREDIT; HYDRANT(S) 601 TO 1,000 FEET, 250 GPM CREDIT.

FIRE DEPARTMENT CONNECTIONS

ANY FIRE DEPARTMENT CONNECTION SIAMESE (FDC) FOR FIRE SPRINKLER OR STANDPIPE SYSTEMS MUST BE WITHIN 100 FEET OF A FIRE HYDRANT. THE FDC MAY BE INSTALLED DIRECTLY ON THE DOUBLE DETECTOR CHECK VALVE BACK FLOW PREVENTOR AS LONG AS THE REQUIREMENT TO BE WITHIN 100 FEET OF A FIRE HYDRANT IS COMPLIED WITH. FIRE DEPARTMENT CONNECTIONS SHALL BE IDENTIFIED BY A SIGN THAT STATES, "NO PARKING FIRE DEPARTMENT CONNECTION" AND SHALL BE DESIGNED IN ACCORDANCE WITH FDOT STANDARDS FOR INFORMATION SIGNAGE. THE LOCATION OF ANY FDC MUST BE SHOWN ON THE SITE PLANS UTILITY SHEET.

DEDICATED FIRE MAINS

THE "POINT OF SERVICE" FOR ANY FIRE MAIN MUST BE CALLED OUT ON THE UTILITY SHEET OF THE SITE PLANS. THIS IS THE POINT WHERE A WATER LINE BECOMES DEDICATED TO ONLY FIRE PROTECTION, SUCH AS SUPPLYING ONLY A FIRE HYDRANT OR FIRE SPRINKLER SYSTEM, AND THERE IS NO POTABLE WATER SUPPLY COMING OFF OF THE WATER LINE BEYOND THIS POINT.

FIRE DEPARTMENT ACCESS

FIRE DEPARTMENT ACCESS ROADS SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH THE FLORIDA FIRE PREVENTION CODE AND RULES ESTABLISHED BY THE CITY OF CLERMONT FOR EVERY FACILITY, BUILDING, OR PORTION OF A BUILDING HEREAFTER CONSTRUCTED OR RELOCATED. A FIRE DEPARTMENT ACCESS ROAD SHALL EXTEND TO WITHIN 50 FEET (15 m) OF AN EXTERIOR DOOR PROVIDING ACCESS TO THE INTERIOR OF THE BUILDING. FIRE DEPARTMENT ACCESS ROADS SHALL BE PROVIDED SUCH THAT IN ANY PORTION OF THE FACILITY OR ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY OF A BUILDING IS LOCATED NOT MORE THAN 150 FEET (46 m) FROM FIRE DEPARTMENT ACCESS ROADS AS MEASURED BY A ROUTE APPROVED BY THE LOCAL FIRE OFFICIAL AROUND THE EXTERIOR OF THE BUILDING OR FACILITY (THE DISTANCE SHALL BE PERMITTED TO BE INCREASED TO 450 FEET WHEN BUILDINGS ARE PROTECTED WITH AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM THAT IS INSTALLED IN ACCORDANCE WITH NFPA STANDARDS).

FIRE DEPARTMENT ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET (6.1 m), AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES (4.1m), SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS (MINIMUM 32 TONS), AND SHALL BE PROVIDED WITH A SURFACE SUITABLE FOR ALL-WEATHER DRIVING CAPABILITIES. THE TURNING RADIUS OF A FIRE DEPARTMENT ACCESS ROAD SHALL BE AS APPROVED BY THE AHJ. DEAD-END FIRE DEPARTMENT ACCESS ROADS IN EXCESS OF 150 FEET (46 m) IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE APPARATUS. WHEN A BRIDGE IS REQUIRES TO BE USED AS PART OF FIRE DEPARTMENT ACCESS ROAD, IT SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH NATIONALLY RECOGNIZED STANDARDS. THE BRIDGE SHALL BE DESIGNED FOR A LIVE LOAD SUFFICIENT TO CARRY THE IMPOSED LOADS OF FIRE APPARATUS (MINIMUM 32 TONS). THE ANGLE OF APPROACH AND DEPARTURE FOR ANY MEANS OF FIRE DEPARTMENT ACCESS SHALL NOT EXCEED 1 FOOT DROP IN 20 FEET (0.3 m DROP IN 6 m), AND THE DESIGN LIMITATIONS OF THE FIRE APPARATUS OF THE FIRE DEPARTMENT SHALL BE SUBJECT TO APPROVAL BY THE AHJ. THE LOAD RATING OF FIRE DEPARTMENT ACCESS ROADS AND BRIDGES SERVING DETACHED ONE OR TWO-FAMILY OCCUPANSIES ONLY MAY BE DECREASED UPON APPROVAL BY THE LOCAL FIRE OFFICIAL.

THE REQUIRED WIDTH OF A FIRE DEPARTMENT ACCESS ROAD SHALL NOT BE OBSTRUCTED IN ANY MANNER, INCLUDING BY THE PARKING OF VEHICLES. MINIMUM REQUIRED WIDTHS AND CLEARANCES SHALL BE MAINTAINED AT ALL TIMES. ENTRANCES TO ROADS, TRAILS, OR OTHER ACCESSWAYS THAT HAVE BEEN CLOSED WITH GATES AND BARRIERS SHALL NOT BE OBSTRUCTED BY PARKED VEHICLES. FIRE LANE MARKINGS MUST BE INSTALLED IN ANY LOCATIONS WHERE VEHICLES MAY PARK AND BLOCK TRAFFIC WAYS OR FREE AND CLEAR ACCESS FOR FIRE AND EMERGENCY APPARATUS.

FIRE LANE MARKINGS ON THE PAVEMENT MUST BE IN DOT YELLOW OR RED AND INCLUDE A CROSSHATCH AREA THAT EXTENDS A MINIMUM OF THREE FEET OUT FROM THE CURB. ANY CURBS MUST ALSO BE PAINTED DOT YELLOW OR RED. MARKED TRAFFIC SURFACES MUST HAVE THE WORDS, FIRE LANE – NO PARKING, PAINTED ON THE SURFACE. THIS WORDING MUST REPEAT THE ENTIRE LENGTH OF THE FIRE LANE, AND BE SPACED NO MORE THAN 50 FEET APART. WORDING ON PAVED SURFACES MUST BE A MINIMUM OF 10" TALL. ANY REQUIRED FIRE LANES SHALL BE MARKED WITH SIGNS WITH THE WORDING, "NO PARKING FIRE LANE BY ORDER OF THE FIRE DEPARTMENT." SUCH SIGNS SHALL BE 12 INCHES BY 18 INCHES WITH A WHITE BACKGROUND AND RED LETTERS AND SHALL BE A MAXIMUM OF 7 FEET IN HEIGHT FROM THE ROADWAY TO THE BOTTOM PART OF THE SIGN. THE SIGNS SHALL BE WITHIN SIGHT OF THE TRAFFIC FLOW AND BE A MAXIMUM OF 50 FEET APART.

A 20' x 20' CROSS-HATCH AREA MUST BE INDICATEDON THE PAVEMENT IN FRONT OF AND CENTERED ON ANY FIRE DEPARTMENT CONNECTIONS FOR FIRE SPRINKLER OR STANDPIPE SYSTEMS THAT ARE LOCATED ON BUILDINGS OR IN PARKING LOTS WHERE VEHICLES MAY PARK AND BLOCK CLEAR ACCESS TO THE CONNECTION. THE CROSS-HATCH AREA MUST INCLUDE WORDING AS SPECIFIED ABOVE. A SIGN INDICATING "NO PARKING FIRE DEPARTMENT CONNECTION" MUST BE INSTALLED IN THIS AREA.

THE CURB MUST BE PAINTED DOT YELLOW OR RED, FOR A LENGTH OF 30 FEET CENTERED ON ANY FIRE HYDRANTS OR FIRE DEPARTMENT SIAMESE CONNECTIONS THAT ARE INSTALLED ALONG A PARKING LOT, DRIVE OR STREET TO PREVENT VEHICLES FROM PARKING WITHIN 15 FEET OF THE HYDRANT OR CONNECTION. WORDING MUST BE PAINTED ON CURBS IN THESE AREAS INDICATING "NO PARKING FIRE LANE" AND MUST BE A MINIMUM OF 3" TALL.

BUILDING MARKINGS

ADDRESS NUMERALS SHALL NOT BE LESS THAN THREE INCHES IN HEIGHT FOR RESIDENTIAL BUILDINGS, STRUCTURES, OR PORTIONS THEREOF, AND AT LEAST SIX INCHES IN HEIGHT FOR ALL OTHER BUILD-INGS, STRUCTURES OR PORTIONS THEREOF. ADDRESS NUMERALS SHALL BE ARABIC NUMERALS OR ALPHABET LETTERS, NO CURSIVE LETTERS.

COMMERCIAL BUILDINGS

"KNOX BOX" OR "FAILSAFE" LOCK BOXES WILL BE REQUIRED ON ALL COMMERCIAL BUILDINGS (NFPA 1, CHAPTER 3-6 AS ADAPTED IN THE FLORIDA FIRE PREVENTION CODE THROUGH FLORIDA ADMINISTRATIRVE CODE CHAPTER 4A-60.003, RULES OF THE STATE FIRE MARSHAL, AND AUTHORIZED BY FLORIDA STATUTES 633.0215, 633.025). THESE SHALL BE INSTALLED ON THE EXTERIOR WALL OF THE BUILDING WITHIN ONE FOOT OF THE LEFT SIDE OF THE MAIN PUBLIC ENTRANCE DOOR AT A HEIGHT OF SIX (6) FEET. IN THE CASE OF A MULTI-OCCUPANCY BUILDING, SUCH AS A ROW OF STORES, MULTI-OFFICE BUILDING, ETC., ONLY ONE LOCK BOX PER BUILDING WILL BE REQUIRED UNLESS EXTENUATING CIRCUMSTANCES INDICATE THE NEED FOR ADDITIONAL LOCK BOXES. THIS BOX SHALL BE INSTALLED ON THE EXTERIOR WALL OF THE BUILDING WITHIN ONE FOOT OF THE LEFT END OF THE SIDE OF THE BUILDING CONTAINING THE MAIN PUBLIC ENTRANCE (AS YOU ARE FACING THE MAIN ENTRANCE) AT A HEIGHT OF SIX (6) FEET. IN THE CASE OF A MULTI-FAMILY COMPLEX, ONLY ONE LOCK BOX WILL BE REQUIRED FOR THE COMPLEX UNLESS EXTENUATING CIRCUMSTANCES INDICATE THE NEED FOR ADDITIONAL LOCK BOXES. THIS BOX SHALL BE LOCATED AT THE MAIN ENTRANCE TO THE CLUBHOUSE, INSTALLED AS INDICATED ABOVE FOR COMMERCIAL BUILDINGS. IF THERE IS NO CLUBHOUSE, THE BOX SHALL BE INSTALLED PER A CITY FIRE OFFICIAL. A CITY FIRE OFFICIAL MAY BE CONTACTED IF IT IS NOT POSSIBLE TO INSTALL THE BOX AT THE LOCATIONS INDICATED ABOVE. THE CITY FIRE OFFICIAL WILL MAKE A DETERMINATION AS TO THE LOCATION WHERE THE BOX WILL BE INSTALLED.

LOCK BOXES SHALL CONTAIN KEYS TO THE BUILDING (INCLUDING ENTRANCE DOORS AND ALL ELECTRICAL AND MECHANICAL ROOMS) AND ANY SYSTEMS IN THE BUILDING (SUCH AS FIRE ALARM PANELS, FIRE ALARM PULL STATIONS, SMOKE DETECTOR RESET, SPRINKLER SYSTEMS, ELEVATORS, ETC.). BOXES FOR MULTI-OCCUPANCY BUILDINGS AND MULTI-FAMILY COMPLEXES SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE KEYS FOR EACH INDIVIDUAL OCCUPANCY AND MASTER KEYS FOR EACH SEPARATE BUILDING, AS WELL AS ANY SYSTEMS IN ALL OCCUPANCIES AND BUILDINGS. ALL LOCK BOXES SHALL ALSO CONTAIN BUSINESS CARDS WITH AFTER-HOURS EMERGENCY CONTACT NUMBERS FOR EACH OCCUPANCY. THE CODE(S) FOR SILENCING AND RESETTING ANY FIRE ALARM SYSTEMS SHALL BE WRITTEN ON THE BACK OF THE BUSINESS CARD(S) FOR EACH OCCUPANCY.

APPLICATIONS FOR THE PURCHASE OF "KNOX BOX" OR "FAILSAFE" EQUIPMENT ARE AVAILABLE FROM THE FIRE DEPARTMENT. EACH BOX TO BE INSTALLED WITHIN THE CITY OF CLERMONT WILL BE KEYED TO ACCOMMODATE CLERMONT FIRE DEPARTMENT'S LOCK BOX KEY. BUILDING OWNERS OR OCCUPANTS WILL NOT HAVE A KEY TO THE BOX. THE OWNER OR DEVELOPER SHALL NOTIFY THE FIRE DEPARTMENT (352-394-7662) AFTER THE BOX HAS BEEN INSTALLED AND ALL REQUIRED KEYS ARE AVAILABLE. A FIRE DEPARTMENT REPRESENTATIVE WILL MEET A REPRESENTATIVE OF THE BUILDING AT THE SITE TO LOCK THE KEYS IN THE BOX. WHENEVER ANY KEYS, CODES OR EMERGENCY CONTACT NUMBERS ARE CHANGED, THE FIRE DEPARTMENT SHALL BE NOTIFIED IMMEDIATELY SO A FIRE DEPARTMENT REPRESENTATIVE CAN UNLOCK THE BOX AND REPLACE THE CHANGED ITEMS.

BUILDING MATERIALS

NFPA 241 (STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS) AS ADAPTED IN THE FLORIDA ADMINISTRATIVE CODE (RULES OF THE STATE FIRE MARSHALL) AND THE FLORIDA FIRE PREVENTION CODE, AND AUTHORIZED BY FLORIDA STATE STATUTES, CHAPTER 633, REQUIRES THAT A WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ACCUMULATES ON THE SITE AND THAT THERE SHALL BE NO DELAY IN THE INSTALLATION OF FIRE PROTECTION EQUIPMENT. THIS SECTION ALSO STATES, "WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED AND IN SERVICE PRIOR TO CONSTRUCTION WORK.

EMERGENCY VEHICLE ACCESS CONTROL (EVAC) SYSTEM

THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS, SECTION 110-192 (1), REQUIRES THAT ALL GATED COMMUNITIES IN THE CITY OF CLERMONT INSTALL THE "EVAC" (EMERGENCY VEHICLE ACCESS CONTROL) REMOTE GATE OPENING EQUIPMENT ON ALL ENTRY GATES. THE EVAC SYSTEM SHALL BE IN ADDITION, AND SEPARATE, FROM THE GATE OPENING SYSTEM THAT IS PROVIDED FOR THE RESIDENTS. A KEYPAD CODE ENTRY DEVICE SHALL ALSO BE INSTALLED AT EACH GATE, WITH THE ENTRY CODE SUPPLIED TO THE FIRE DEPARTMENT IN WRITING UPON INSTALLATION. THE DEVELOPER SHALL PROVIDE FIVE (5) CONTROLLERS FOR THE EVAC SYSTEM TO THE CLERMONT FIRE DEPARTMENT. FOR FURTHER REQUIREMENTS REFER TO THE CITY OF CLERMONT LAND DEVELOPMENT REGULATIONS, SECTION 110-192 (1). SECURITY ACCESS CONTROL, 800-637-5945, DISTRIBUTES THE EVAC SYSTEM. SECURITY ACCESS CONTROL MAY BE CONTACTED REGARDING ANY QUESTIONS ABOUT THE SYSTEM OR TO GET INFORMATION ON LOCAL VENDORS THAT CAN INSTALL THE SYSTEM.

NEEDED FIRE FLOW CALCULATIONS

NEEDED FIRE FLOW CALCULATIONS FOR ALL BUILDINGS ON THE SITE BASED ON THE ISO FIRE SUPPRESSION RATING SCHEDULE GUIDE FOR NEEDED FIRE FLOW CALCULATIONS SHALL BE SHOWN ON THE SITE PLANS. THE INSURANCE SERVICES OFFICE (ISO) GUIDE FOR CALCULATING THE NEEDED FIRE FLOW CAN BE FOUND ON THE ISO WEB SITE AT http://www.isomitigation.com/downloads/ppc3001.pdf. THE FIRE FLOW CALCULATIONS ARE BASED ON A NON-SPRINKLERED BUILDING. BUILDINGS PROTECTED BY AN AUTOMATIC FIRE SPRINKLER SYSTEM ARE THEN GIVEN CREDIT BASED ON 50% OF NEEDED FIRE FLOW PLUS SPRINKLER SYSTEM REQUIREMENTS. THIS CALCULATION IS USED AS ONE OF THE FACTORS IN DETERMINING THE NUMBER OF FIRE HYDRANTS REQUIRED ON THE SITE.

A NEEDED FIRE FLOW CALCULATION WORKSHEET IS AVAILABLE IN MS EXCEL FORMAT AT THE CITY OF CLERMONT WEB SITE: www.cityofclermontfl.com, CITY DEPARTMENTS, FIRE DEPARTMENT, INSPECTIONS/PREVENTION.

FINAL APPROVAL OF SITE PLANS

AFTER REVIEW OF THE SITE PLANS BY THE CITY OF CLERMONT SITE REVIEW COMMITTEE, THE SITE PLANS, AS APPROVED BY THE CITY, SHALL BE SUBMITTED TO LAKE COUNTY BUILDING DEPARTMENT FOR A FIRE AND LIFE SAFETY REVIEW CONDUCTED BY A LAKE COUNTY BUILDING DEPARTMENT PLANS EXAMINER. SITE PLANS WILL NOT RECEIVE FINAL APPROVAL UNTIL AFTER BEING REVIEWED AND APPROVED BY LAKE COUNTY BUILDING DEPARTMENT.

GENERAL NOTES LAST REVISED
02-14-05

67971-2

RECEIVED
AUG 1 4 2006
PDS
ALTAMONTE SVC. CTR.

P.E. CERT. OF AUTHORIZATION # 7350
AUG 1 1 2006
SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION 44677
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KCG
KELLY, COLLINS & GENTRY, INC.
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7858 FAX (407) 898-1488

6	
5	
4	
3	
2	
1	
	DATE

PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

CITY OF CLERMONT
GENERAL NOTES

DRAWN:	CAG
DESIGN:	CAG
CHECKED:	SMG
JOB NO.:	432.000
DATE:	08/01/06

SHEET
C-13

RILEY & Company, Inc. (H-20 GP)©

SCOPE: Supply and install one complete H-20 GP Pre-Fab Lift Station, per design. Pumps shall be capable of grinding and pumping domestic & commercial sewage.

Complete system shall be supplied by:

RILEY & Company, Inc.
Sanford, FL 32750 (Ph. 407–265–9963)

Contract to be awarded on the basis of the base bid H-20 GP LIFT STATION .

Due to the structural strength, corrosion resistance, and the leak-proof design of the H-20 GP complete system, concrete wetwells will not be approved. After the H-20 load rated wetwell has been installed, the ASTM Certification Number and Serial Tracking Number must be visible.

Certification of the wetwell H-20 load rating must be supplied with submittals. H-20 certification must be signed and sealed by an engineer registered in the State of Florida.

PUMPS: Submersible grinder pumps shall be HOMA Model GRP. The pumps shall be installed in the H-20 GP FRP wetwell utilizing a dual slide rail system. The grinder unit shall be capable of macerating materials normally found in domestic and commersial sewage into a fine slurry which will pass through the pump and the discharge piping. pump and the Sch.80 PVC discharge piping.

Oil filled motors are not considered equal to air filled motors and therefore will not be considered an equal to the HOMA PUMPS.

Stator winding shall be open type with Class F insulation and shall be heat-shrink fitted into the stator housing. The use of pins, bolts, or other fastening devices is not acceptable.
Stator winding shall be open type with Class F insulation and shall be heat-
A heat sensor theromstat shall be attached to the top end of the motor winding and shall be connected in series with the magnetic contactor coil in the control panel to stop motor if winding temperature exceeds 140 C., but shall automatically reset when the winding temperature returns to normal.
Two heat sensor thermostats shall be used on three phase motors.

The pump motor grinder shaft shall be AISI 430F SS threaded to take the pump impeller and the grinder impeller.
Upper & lower mechanical seals shall be Silicon Carbide vs Silicon Carbide.

DUPLEX CONTROL PANEL:

Control panel shall be assembled and built by a TUV (UL508A CERTIFIED) manufacturing facility.

The Enclosure shall be NEMA 4X, minimum 24" high x 20" wide x 8" deep fiberglass with padlockable draw latches.

The enclosure shall have external mounting feet to allow for wall mounting. All hardware shall be stainless steel. All conduit penetrations shall have approved seal off fittings and shall be properly sealed to prevent wetwell gases from entering enclosure.

The following components shall be mounted through the enclosure:
1- ea. Red Alarm Beacon (Light)
1- ea. Alarm Horn
1- ea. Generator Receptacle w/ weatherproof cover
1- ea. Alarm Silence Pushbutton

The backpanel shall be fabricated from .125, 5052-H32 marine alloy aluminum. All components shall be mounted by machined stainless steel screws.

The following components shall be mounted to backpanel:
2- ea. Motor Contactors
1- ea. Volt Monitor (Single Phase) Phase Monitor (Three Phase)
1- ea. Control Transformer (480 Volt Only)
1- ea. Silence Relay
1- ea. Duplex Alternator
20- ea. Terminals For Field Connections
6- ea. Terminals For Motor Connections (Single Phase Only)
3- ea. Grounding Lugs

The innerdoor shall be fabricated from .080, 5052-H32 marine alloy aluminum. The innerdoor shall have a continuous aluminum piano hinge.

The following components shall be mounted through the innerdoor:
1- ea. Main Circuit Breaker
1- ea. Emergency Circuit Breaker
1- ea. Mechanical Interlock For Emergency And Main Breakers
2- ea. Short Circuit Protectors
1- ea. Control Circuit Breaker
1- ea. Hand-Off-Auto Selector Switches
2- ea. Pump Run Pilot Lights
1- ea. Power On Pilot Light
2- ea. Elapse Time Meters (Non-Resetable)
1- ea. GFI Duplex Convenience Outlet

COMPONENT SPECIFICATIONS:
All circuit breakers shall be molded thermal magnetic.
The mechanical interlock shall prevent the normal and emergency main breakers being energized at the same time.
An emergency generator receptacle shall be supplied in accordance with DEP standards. The generator receptacle shall be adequately sized to meet the equipment operating conditions.
All motor short circuit protection devices must provide for undervoltage release and class 10 overload protection on all three phases. Visable trip indication, test, and reset capability must be provided without opening inner door.
Open frame, across the line, contactors shall be rated per IEC standards and properly sized per the motor requirements.
Contactors shall provide for safe touch power and control terminals.
Lightning Arrestor shall meet or exceed the requirements of ANSI/IEEE Std. C62.21-1984 section 8.6.1. and 8.7.3 shall be supplied by electrician and mounted on the bottom side of the switch disconnect ahead of the pump control panel.
A voltage monitor shall be supplied for single phase service.
A phase monitor shall be supplied for (3) phase service.
A green pilot light shall be supplied for each motor. The pilot light shall illuminate each time the motor is called to run.
Each pump shall have an Elapse Time Meter to record the accumulated run time. The ETM shall be 2" diameter, non-resettable, six digit, totally encapsulated unit.
A Red pilot light shall be supplied for control power. The pilot light shall illuminate when the control power is available inside the control panel.
Relays shall be ice-cube plug in type. Relay contacts shall be rated 10 amp minimum, DPDT.
Twenty (20) terminals shall be supplied for field connections.
The terminals shall be rated 25 amps minimum.
Each motors over-temperature contact shall be connected to the terminal strip and shall open a contact to de-energize the appropriate motor upon a high temperature within the motor.
A 15 Amp GFI duplex receptacle shall be supplied and mounted on the innerdoor.
Ground lugs shall be supplied and appropriately sized for each motor and for service entrance.

Nameplates for the innerdoor and back panel shall be of a graphic design, specifically depicting the intent for each device.

MISCELLANEOUS: All wiring on the backpanel shall be containted within the wiring duct. All wiring between the innerdoor and the backpanel shall be contained with in a plastic spiral wrap.
Each wire shall have a wire number at each end to correspond to the as built drawing for field troubleshooting.
The control panel shall be assembled by a TUV (UL508A Certified) manufacturing facility.

FASTNERS & APPURTANCES: All fasternes, lifting cables, float cable bracket, hinges, and appurtances shall be made of AISI 304SS.
A 304SS slide/latch assembly shall be provided tor holding the doors open on the wetwell and valve box.
Slide rails shall be made of SCH.40 AISI 304SS pipe.
Pump lifting cables shall be made of AISI 304 SS.
Pump lifting bales shall be made of AISI 304 SS.

H-20 LOAD RATED WETWELL WITH LIFTING LUGS:
The fiberglass wetwell must be H-20 load rated with integral lifting lugs, fiberglass slope in bottom of wetwell and valve box.
Certification of the H-20 load rating must be supplied at the time of submittals to Engineer.
The wetwell shall be manufactured of fiberglass reinforced polyester (FRP) of depth and diameter as shown on the lift station elevation detail. The wall thickness shall be adequate for the depth of the wetwell to maintain the H-20 LOAD RATING.

EXECUTION:
Installation shall be in strict accordance with the manufacturer's recommendations in the locations shown on the drawing.

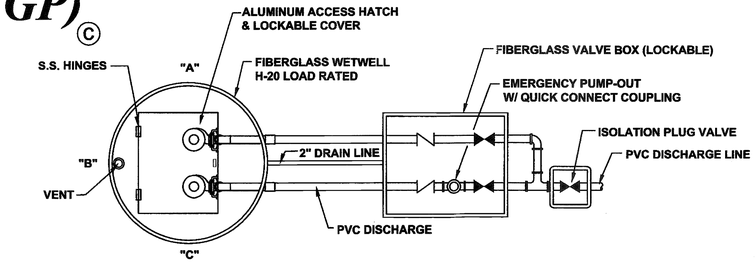
INSPECTION & TESTING: A factory representative shall be provide for a one (1) time start-up and shall have complete knowledge of the proper operation and maintenance of complete system.
Megger the motors. The pump motors shall be megged out prior to the start-up to ensure that the insulation of the pump motor/cable is intact.
The pump controls and pumps shall be checked for mechanical reliability and proper operation.

PUMP DATA		ELEVATIONS	
PRIMARY PUMP CAPACITY	80 GPM	TOP OF WETWELL	169.00
PRIMARY TDH	24.4 'TDH	INLET INVERT	160.00
PUMP MANUFACTURER	HOMA	HIGH LEVEL ALARM	159.00
PUMP MODEL #	GRP26/1	2nd PUMP ON	158.50
R.P.M.	3450	1st PUMP ON	158.00
HORSEPOWER	2.4	PUMPS OFF	156.50
ELECTRICAL/ VOLTS / PHASE	230/1	BOTTOM OF WETWELL	155.00
PUMP DISCHARGE SIZE	2"	WETWELL DIAMETER	48"
IMPELLER DIAMETER	5 9/16		

* ELECTRICIAN NOTES:

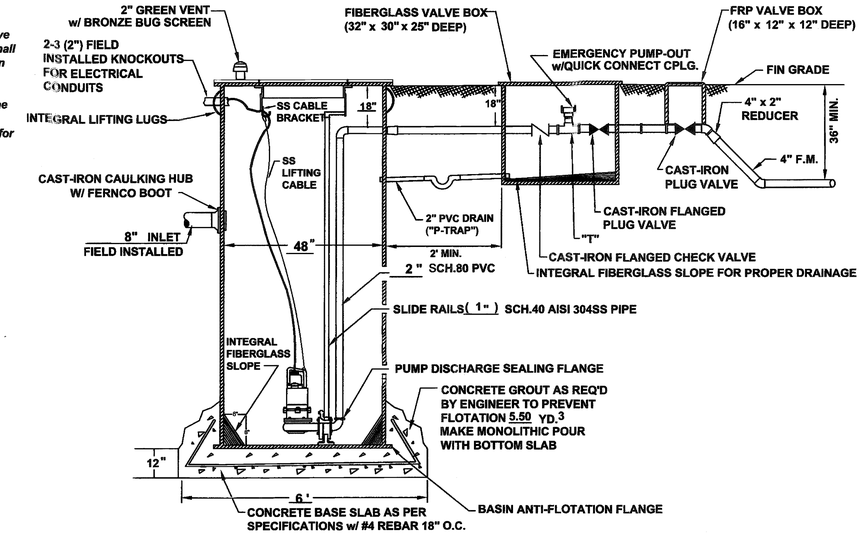
1. DRAWING NOT TO SCALE
* 2. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES
* 3. ELECTRICIAN SHALL SEAL OFF CONDUIT RUNS
* 4. ELECTRICIAN TO MOUNT LIGHTNING ARRESTOR AT SWITCH DISCONNECT
* 5. CONTRACTOR SHALL VERIFY POWER SOURCE PRIOR TO ORDERING EQUIPMENT

RILEY & CO. / H-20 GP 04-06

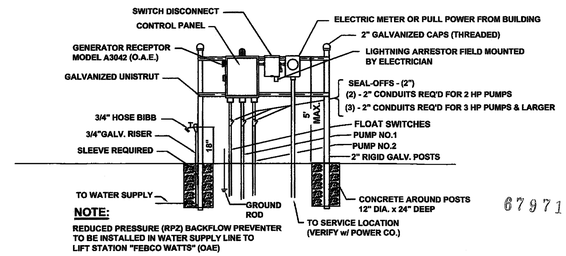


NOTE: PUMP CONTROL PANEL SHALL BE LOCATED 3 FEET FROM WETWELL PERIMETER OPTIONALLY AT "A", "B", OR "C"

LIFT STATION PLAN



LIFT STATION SECTION



ELECTRICAL RISER

67971-2

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

RILEY & Company, Inc.
5491 Benchmark Lane
Sanford, FL 32773
PH. 407-265-9963

KELLY, COLLINS & GENTRY, INC.
KCG
1600 EAST ROBINSON STREET, SUITE 400
ORLANDO, FLORIDA 32803
(407) 898-7868 FAX (407) 898-1488

6	5	4	3	2	1	DATE	REVISION

PREPARED FOR: TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

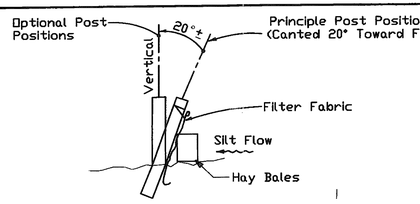
LIFT STATION PLAN

DRAWN:	JRB
DESIGN:	CAG
CHECKED:	SMG
JOB NO.:	432.000
DATE:	08/01/06

SHEET C–14

GENERAL NOTES

1. EROSION CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREAS BY QUICKLY STABILIZING DISTURBED AREAS TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING SOD, HAY BALES, AND OTHER MEANS ACCEPTABLE TO OWNER, ENGINEER AND REGULATORY AGENCIES. SILT FENCE TO BE MAINTAINED. CONTRACTOR TO INSPECT SILT FENCE AT END OF EACH WORKING DAY.
2. ALL STORM DRAINAGE INLETS AND PIPES SHALL BE PROTECTED FROM SILT, SAND AND DEBRIS DURING CONSTRUCTION. ANY ACCUMULATION OF DEBRIS WITHIN THE STORM DRAINAGE PIPE SYSTEM SHALL BE REMOVED BY CONTRACTOR.
3. PROVIDE HAY BALES IN FRONT OF ALL DRAINAGE CURB INLETS MAINTAIN THESE MEASURES DAILY.
4. SILT FENCE SHALL BE IN-PLACE AS SHOWN PRIOR TO CONSTRUCTION. PLEASE SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EROSION CONTROL
5. GRAVEL LAYER SHALL BE 12" MIN THICK.
6. CONSTRUCTION ENTRANCE TO BE GRADED SO THAT NO SEDIMENTS LEAVE THE SITE.
7. TRUCK SPEED TO BE REDUCED TO CONTROL DUST.
8. IF APPLICABLE, ROUTE RUNOFF FROM STABILIZED ENTRANCES THROUGH A SEDIMENT TRAPPING DEVICE BEFORE DISCHARGE.
9. CONTRACTOR TO IMPLEMENT "STREET SWEEPING & VACUUMING" AS NEEDED. CLEAN DIRT FROM ROADWAYS DAILY.
10. ALL EMPLOYEES, SUBCONTRACTORS & SUPPLIERS TO UTILIZE CONSTRUCTION ACCESS.
11. ALL EXIT LOCATIONS INTENDED TO BE USED CONTINUOUSLY AND FOR A PERIOD OF TIME SHALL HAVE STABILIZED CONSTRUCTION ENTRANCE/EXIT BMPs (TC-1 "STABILIZED CONSTRUCTION ENTRANCE/EXIT" OR TC-3 "ENTRANCE/OUTLET TIRE WASH")
12. INSPECT ROUTINELY FOR DAMAGE AND ASSESS EFFECTIVENESS OF THE BMP. REMOVE AGGREGATE, SEPARATE AND DISPOSE OF SEDIMENT IF CONSTRUCTION ENTRANCE/EXIT IS CLOGGED WITH SEDIMENT.
13. KEEP ALL TEMPORARY ROADWAY DITCHES CLEAR.
14. INSPECT ALL SEDIMENT CONTROL DEVICES FOR DAMAGE AND REPAIR AS NEEDED.
15. CONTRACTOR SHALL EMPLOY SAFETY AND ROADWAY ENTRY AND EXIT PLANS ON A DAILY/WEEKLY BASIS.
16. COORDINATE ALL UTILITY CROSSINGS AND ADDRESS CONFLICTS IN ADVANCE OF BEGINNING WORK IN A GIVEN AREA(S)

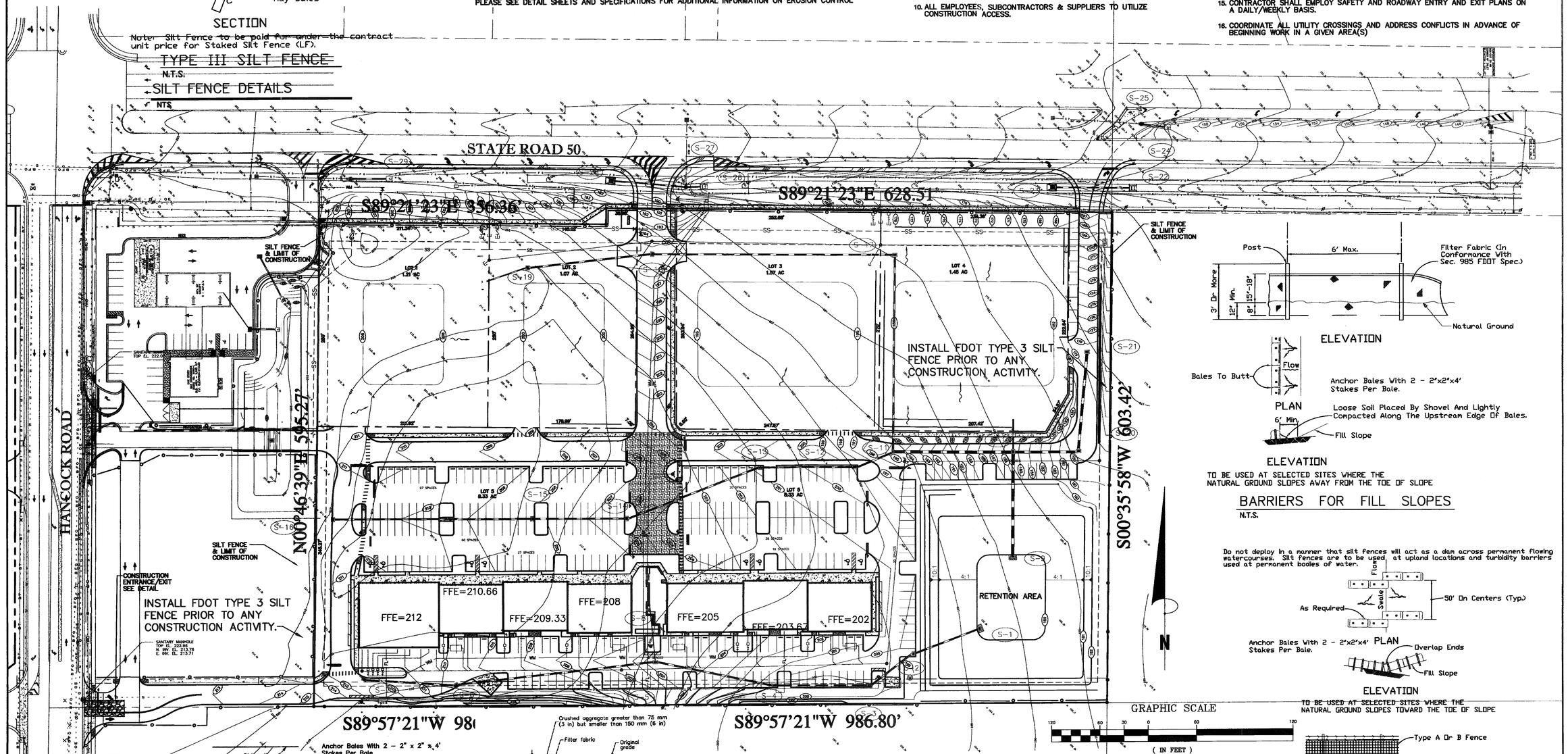


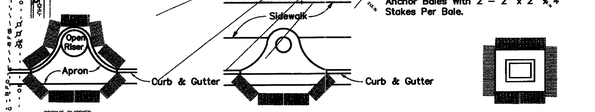
SECTION

Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE III SILT FENCE
N.T.S.

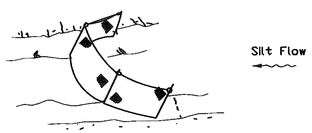
SILT FENCE DETAILS
NTS





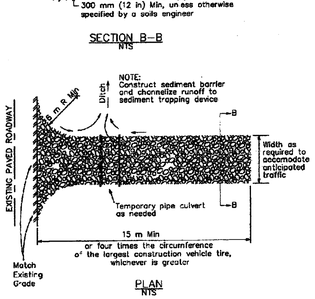
PARTIAL INLET COMPLETED INLET INLET IN PAVEMENT

PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



Type III Silt Fence

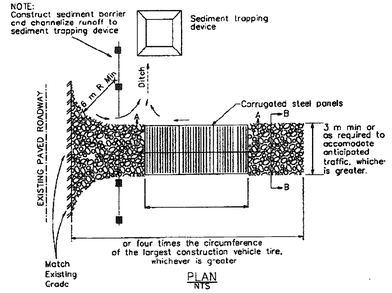
SILT FENCE APPLICATIONS
N.T.S.



SECTION B-B
NTS

PLAN
NTS

Stabilized Contraction Entrance/Exit (Type 1)



PLAN
NTS

Stabilized Construction Entrance/Exit (Type 2)

GRAPHIC SCALE

120 60 30 0 60 120
(IN FEET)
1 inch = 60 ft.

ELEVATION

PLAN

ELEVATION

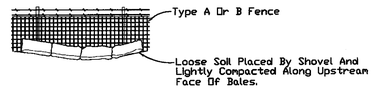
TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE

BARRIERS FOR FILL SLOPES
N.T.S.

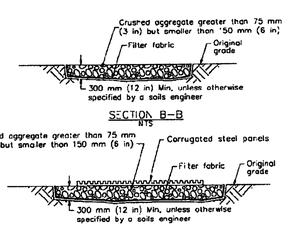
Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

ELEVATION

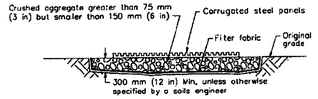
TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES TOWARD THE TOE OF SLOPE



FENCE BACKED BY BALES
N.T.S.



SECTION B-B
NTS



SECTION A-A
NOT TO SCALE

67971-2

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

CERT. OF AUTHORIZATION # 7256

SCOTT M. GENTRY, P.E.
FLORIDA REGISTRATION #46877
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

KELLY, COLLINS & GENTRY, INC.
KCG
1700 NORTH ORANGE AVENUE, SUITE 400
ORLANDO, FLORIDA 32804
(407) 898-7656 FAX (407) 898-1486

6			
5			
4			
3			
2			
1			
		DATE	REVISION

PREPARED FOR:
TRYCON ASSOCIATES

HANCOCK COMMONS
CLERMONT, FLORIDA

SOIL EROSION CONTROL PLAN

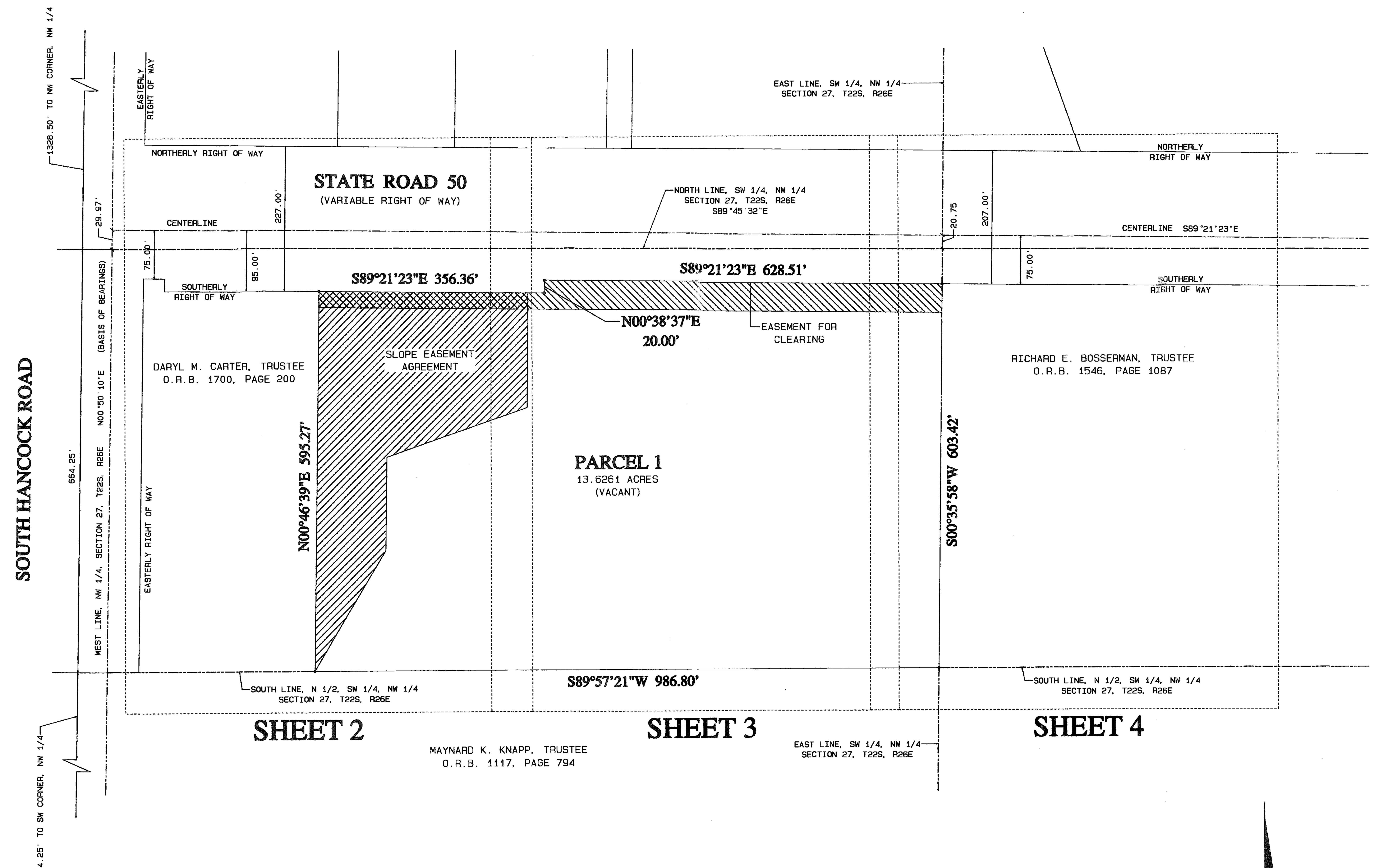
DRAWN: JRB
DESIGN: CAG
CHECKED: SMG
JOB NO.: 432.000
DATE: 08/01/06

SHEET
C-15

W:\1 CAD\Trycon\South_Hancock\CONSTR\EV_8_1_06\HAN_EROSION.dwg, 08/03/2006 2:54:39 PM

BOUNDARY & TOPOGRAPHIC SURVEY

OF A PORTION OF THE SW 1/4 OF THE NW 1/4, SECTION 27, T22S, R26E
LAKE COUNTY, FLORIDA



NOTES

1. THIS SURVEY WAS COMPLETED FOR THE PARTIES LISTED IN THE TITLE BLOCK AND SHALL NOT BE USED BY ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF THE SIGNING SURVEYOR.

2. THIS SURVEY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD, BOTH WRITTEN AND UNWRITTEN.

3. NO TREES WERE LOCATED ON THE PROPERTY DESCRIBED HEREON AS A PART OF THIS SURVEY.

4. NO TITLE SEARCH FOR EASEMENTS, RESTRICTIONS, OR OTHER FACTS OF RECORD WAS PROVIDED FOR THE PREPARATION OF THIS SURVEY. THE EASEMENTS SHOWN ON THIS SURVEY ARE FOR REFERENCE ONLY AND HAVE NOT BEEN VERIFIED BY OFFICIAL RECORDS DOCUMENTS.

5. ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON A BENCHMARK PROVIDED BY LAKE COUNTY DESCRIBED AS FOLLOWS: IRON ROD AT THE NORTHWEST CORNER OF SECTION 28, T22S, R26E WITH A RECORDED ELEVATION 258.47' ABOVE SEA LEVEL.

6. UNDERGROUND UTILITIES SHOWN ON THIS SURVEY WERE LOCATED FROM MARKS PLACED ON THE GROUND BY THE UTILITY LOCATING SERVICE(S). THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA COVERED ON THIS SURVEY. THE SURVEYOR FURTHER DOES NOT GUARANTEE THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATIONS INDICATED; UNDERGROUND UTILITIES ARE SHOWN AS ACCURATELY AS POSSIBLE FROM THE AVAILABLE INFORMATION.

7. THE FOLLOWING WAS USED IN THE PREPARATION OF THIS SURVEY: STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP FOR STATE ROAD NUMBER 50, LAKE COUNTY, FLORIDA, SECTION 11070-2505, APPROVED FEBRUARY 1, 1973, AND LAST REVISED DECEMBER 19, 1974.

8. A REVIEW OF FLOOD INSURANCE RATE MAPS FOR LAKE COUNTY, FLORIDA, INDICATES THAT THE PROPERTY DESCRIBED HEREON LIES WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN). THIS INFORMATION WAS TAKEN FROM FLOOD INSURANCE RATE MAP NUMBER 12069C0565D, EFFECTIVE JULY 3, 2002.

LEGEND

SPOT ELEVATION	ELECTRIC PULLBOX
UTILITY POLE OR TRAFFIC SIGNAL POLE	INV — INVERT
STORM DRAINAGE INLET OR CONTROL STRUCTURE	RCP — REINFORCED CONCRETE PIPE
SIGN	O.R.B. — OFFICIAL RECORDS BOOK
UTILITY MARKER	TSB — TRAFFIC SIGNAL BOX
WATER VALVE	FDOT — FLORIDA DEPARTMENT OF TRANSPORTATION
MITERED END SECTION	OVERHEAD ELECTRIC LINE
TEMPORARY SITE BENCH MARK	FIBER OPTIC CABLE LINE
SET 5/8" IRON ROD & CAP LELSI LB6846	BURIED TELEPHONE LINE
LIGHT POLE	WATER MAIN LINE
	GAS MAIN LINE
	STORM DRAINAGE LINE

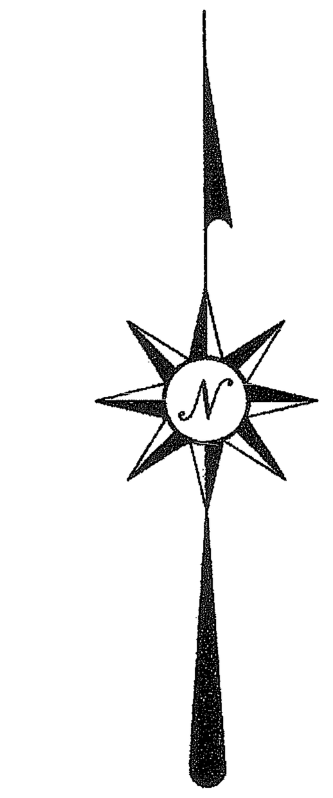
LEGAL DESCRIPTION

THE EAST 3/4 OF THE NORTH 1/2 OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 27, TOWNSHIP 22 SOUTH, RANGE 26 EAST, LAKE COUNTY, FLORIDA.

SAID PARCEL CONTAINS 593,553 SQUARE FEET (13.6261 ACRES) OF LAND, MORE OR LESS.

GRAPHIC SCALE 1"=100'

0 100 200 300



67971-2

RECEIVED
AUG 1 4 2006
PDS
ALTAMONTE SVC. CTR.

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A LICENSED SURVEYOR AND MAPPER

REVISIONS:

SURVEYOR'S CERTIFICATION

I, THE UNDERSIGNED, FLORIDA LICENSED SURVEYOR AND MAPPER DO HEREBY CERTIFY THAT I HAVE COMPLETED THIS SURVEY IN COMPLIANCE WITH FLORIDA MINIMUM TECHNICAL STANDARDS AS DEFINED IN FLORIDA ADMINISTRATIVE CODE

THOMAS A. KOHN PLS #4640
OR ROGER H. HARRAH LS #5294
OR CHRISTOPHER J. STELLY LS #6445

DATE OF DRAWING:		LAST FIELD WORK: FEB 2004
MANAGER: TAK	CADD: JDH	CREW CHIEFS: CDW, MSC
PROJECT NUMBER: 251-04001		COMPUTER FILE: 251001BT.PRO
FIELD BOOK: 298 299 301 303		SCALE: 1" = 100' / SHEET 1 OF 4

BOUNDARY AND TOPOGRAPHIC SURVEY

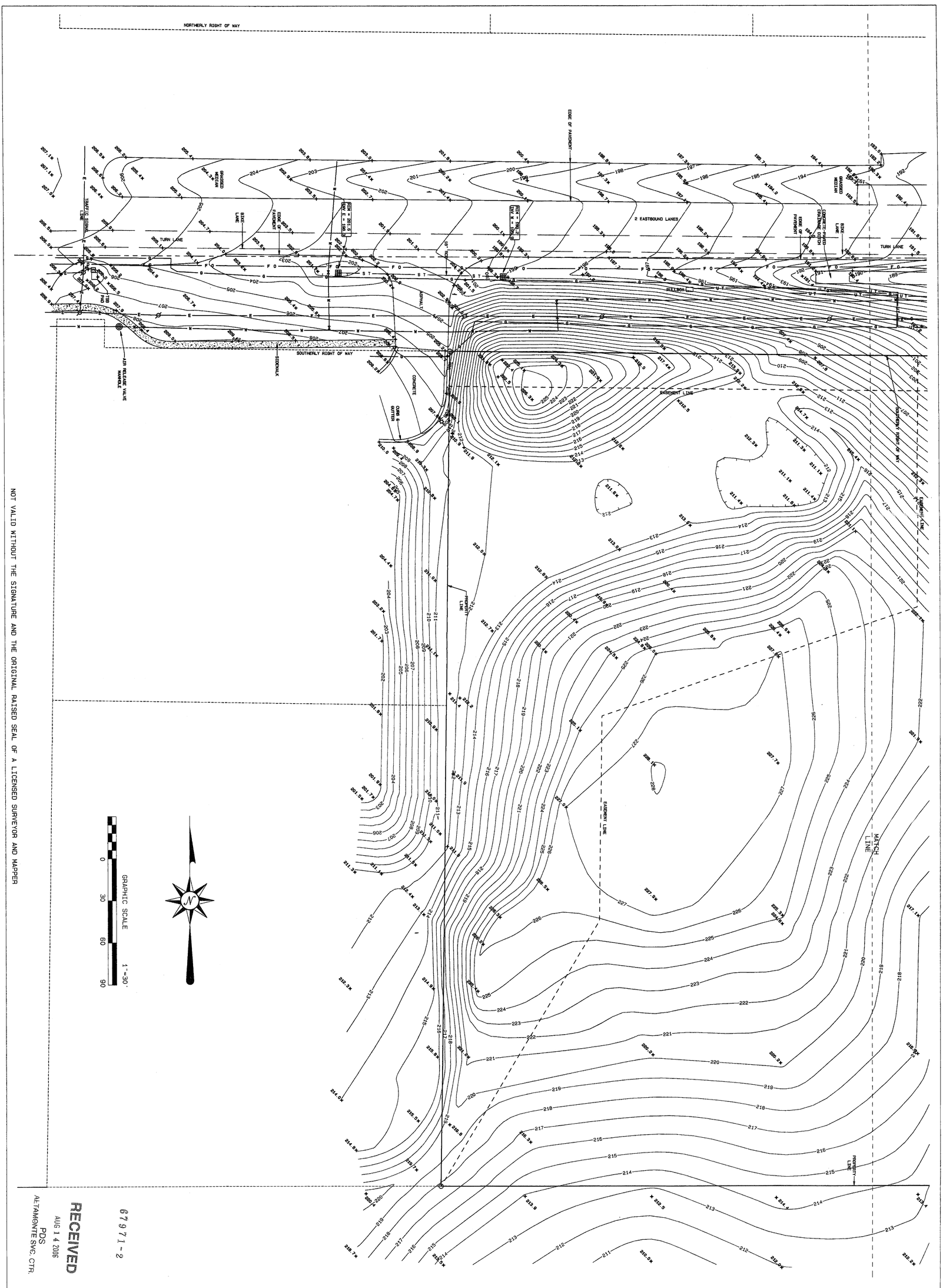
OF

A PORTION OF THE SW 1/4 OF THE NW 1/4
OF SECTION 27, TOWNSHIP 22 SOUTH, RANGE 26 EAST
LAKE COUNTY, FLORIDA

FOR

TRYCON, INC.

LEADING EDGE LAND SERVICES INCORPORATED
6750 FORUM DRIVE
SUITE 310
ORLANDO, FLORIDA 32821
PHONE: (407) 351-6730
FAX: (407) 351-9691
E-MAIL: survey@leadingedgels.com
FLORIDA LICENSED BUSINESS NUMBER LB 6846



NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A LICENSED SURVEYOR AND MAPPER

RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

67971-2

LEADING EDGE LAND SERVICES
INCORPORATED
6750 FORUM DRIVE
SUITE 310
ORLANDO, FLORIDA 32821
PHONE: (407) 351-6730
FAX: (407) 351-9691
E-MAIL: survey@leadingedgels.com
FLORIDA LICENSED BUSINESS NUMBER LB 6846

BOUNDARY AND TOPOGRAPHIC SURVEY

OF

A PORTION OF THE SW 1/4 OF THE NW 1/4
OF SECTION 27, TOWNSHIP 22 SOUTH, RANGE 26 EAST
LAKE COUNTY, FLORIDA

FOR

TRYCON, INC.

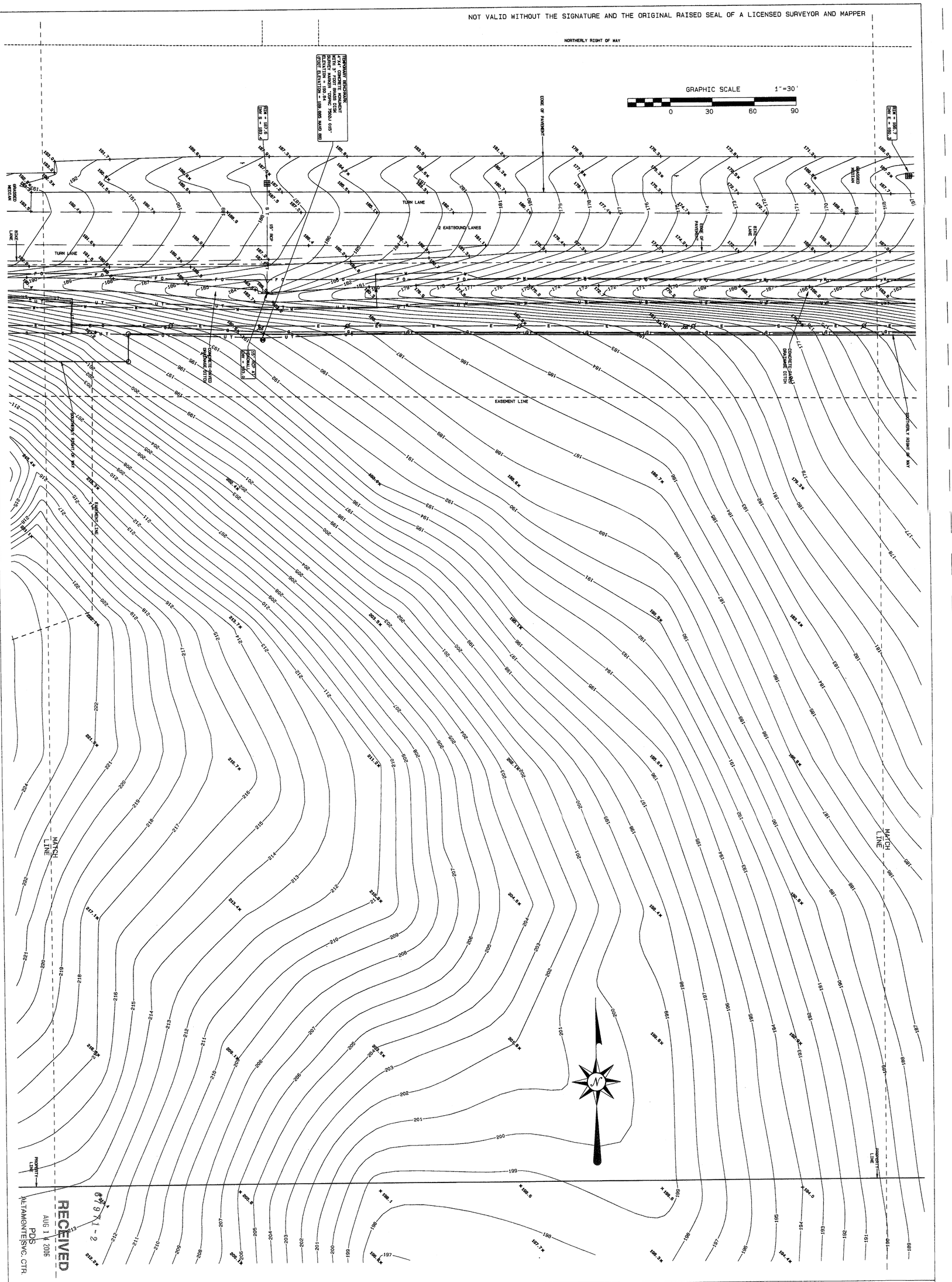
SURVEYOR'S CERTIFICATION

I, THE UNDERSIGNED, FLORIDA LICENSED SURVEYOR AND MAPPER DO HEREBY CERTIFY THAT I HAVE COMPLETED THIS SURVEY IN COMPLIANCE WITH FLORIDA MINIMUM TECHNICAL STANDARDS AS DEFINED IN FLORIDA ADMINISTRATIVE CODE

THOMAS A. KOHN PLS #4640
OR ROGER H. HARRAH LS #5294
OR CHRISTOPHER J. STELLY LS #6445

REVISIONS:

DATE OF DRAWING:	LAST FIELD WORK: FEB 2004
MANAGER: TAK CADD: JDH	CREW CHIEFS: CDW, MSC
PROJECT NUMBER: 251-04001	COMPUTER FILE: 25100181BT.PRO
FIELD BOOK: 298 299 301 303	SCALE: 1" = 30' SHEET 2 OF 4



RECEIVED
AUG 14 2006
PDS
ALTAMONTE SVC. CTR.

LEADING EDGE LAND SERVICES
INCORPORATED
6750 FORUM DRIVE
SUITE 310
ORLANDO, FLORIDA 32821
PHONE: (407) 351-6730
FAX: (407) 351-9691
E-MAIL: survey@leadingedgels.com
FLORIDA LICENSED BUSINESS NUMBER LB 6846

BOUNDARY AND TOPOGRAPHIC SURVEY

OF

A PORTION OF THE SW 1/4 OF THE NW 1/4
OF SECTION 27, TOWNSHIP 22 SOUTH, RANGE 26 EAST
LAKE COUNTY, FLORIDA

FOR

TRYCON, INC.

SURVEYOR'S CERTIFICATION

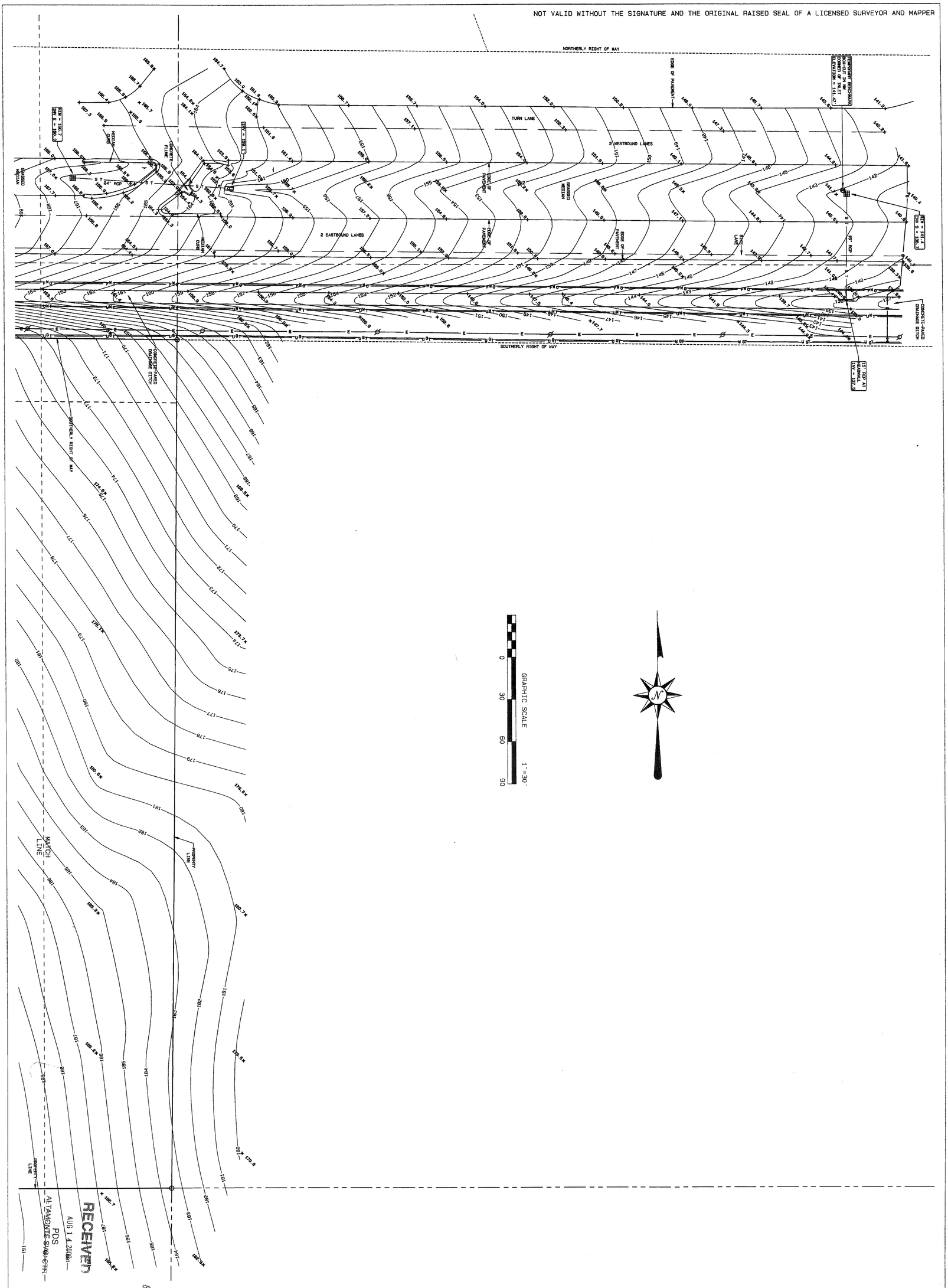
I, THE UNDERSIGNED, FLORIDA LICENSED SURVEYOR AND MAPPER DO HEREBY CERTIFY THAT I HAVE COMPLETED THIS SURVEY IN COMPLIANCE WITH FLORIDA MINIMUM TECHNICAL STANDARDS AS DEFINED IN FLORIDA ADMINISTRATIVE CODE

THOMAS A. KOHN PLS #4640
OR ROGER H. HARRAH LS #5294
OR CHRISTOPHER J. STELLY LS #6445

REVISIONS:

DATE OF DRAWING:		LAST FIELD WORK: FEB 2004
MANAGER: TAK	CADD: JDH	CREW CHIEFS: CDW, MSC
PROJECT NUMBER: 251-04001		COMPUTER FILE: 251001BT.PRO
FIELD BOOK: 298 299 301 303		SCALE: 1" = 30' SHEET 3 OF 4

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A LICENSED SURVEYOR AND MAPPER



RECEIVED
AUG 14 2006
PDS
ALTAMONTE SPRINGS, FL

6971-2

LEADING EDGE LAND SERVICES
INCORPORATED
6750 FORUM DRIVE
SUITE 310
ORLANDO, FLORIDA 32821
PHONE: (407) 351-6730
FAX: (407) 351-9691
E-MAIL: survey@leadingedgels.com
FLORIDA LICENSED BUSINESS NUMBER LB 6845

BOUNDARY AND TOPOGRAPHIC SURVEY

OF

A PORTION OF THE SW 1/4 OF THE NW 1/4
OF SECTION 27, TOWNSHIP 22 SOUTH, RANGE 26 EAST
LAKE COUNTY, FLORIDA

FOR

TRYCON, INC.

SURVEYOR'S CERTIFICATION

I, THE UNDERSIGNED, FLORIDA LICENSED SURVEYOR AND MAPPER DO HEREBY CERTIFY THAT I HAVE COMPLETED THIS SURVEY IN COMPLIANCE WITH FLORIDA MINIMUM TECHNICAL STANDARDS AS DEFINED IN FLORIDA ADMINISTRATIVE CODE

THOMAS A. KOHN PLS #4640
OR ROGER H. HARRAH LS #5294
OR CHRISTOPHER J. STELLY LS #6445

REVISIONS:

DATE OF DRAWING:	LAST FIELD WORK: FEB 2004
MANAGER: TAK / CADD: JDH	CREW CHIEFS: CDW, MSC
PROJECT NUMBER: 251-04001	COMPUTER FILE: 251001BT.PRO
FIELD BOOK: 298 299 301 303	SCALE: 1" = 30' / SHEET 4 OF 4