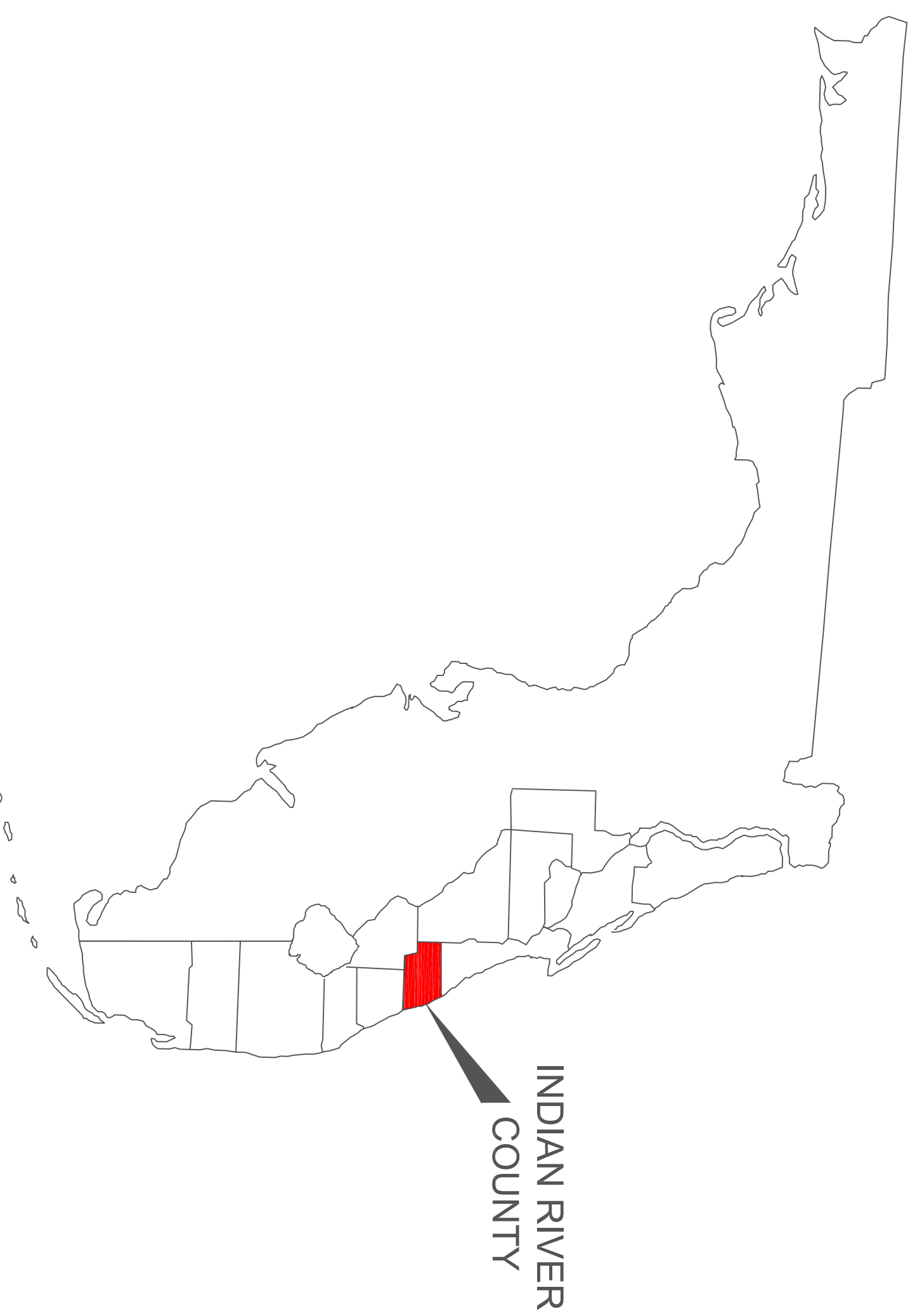


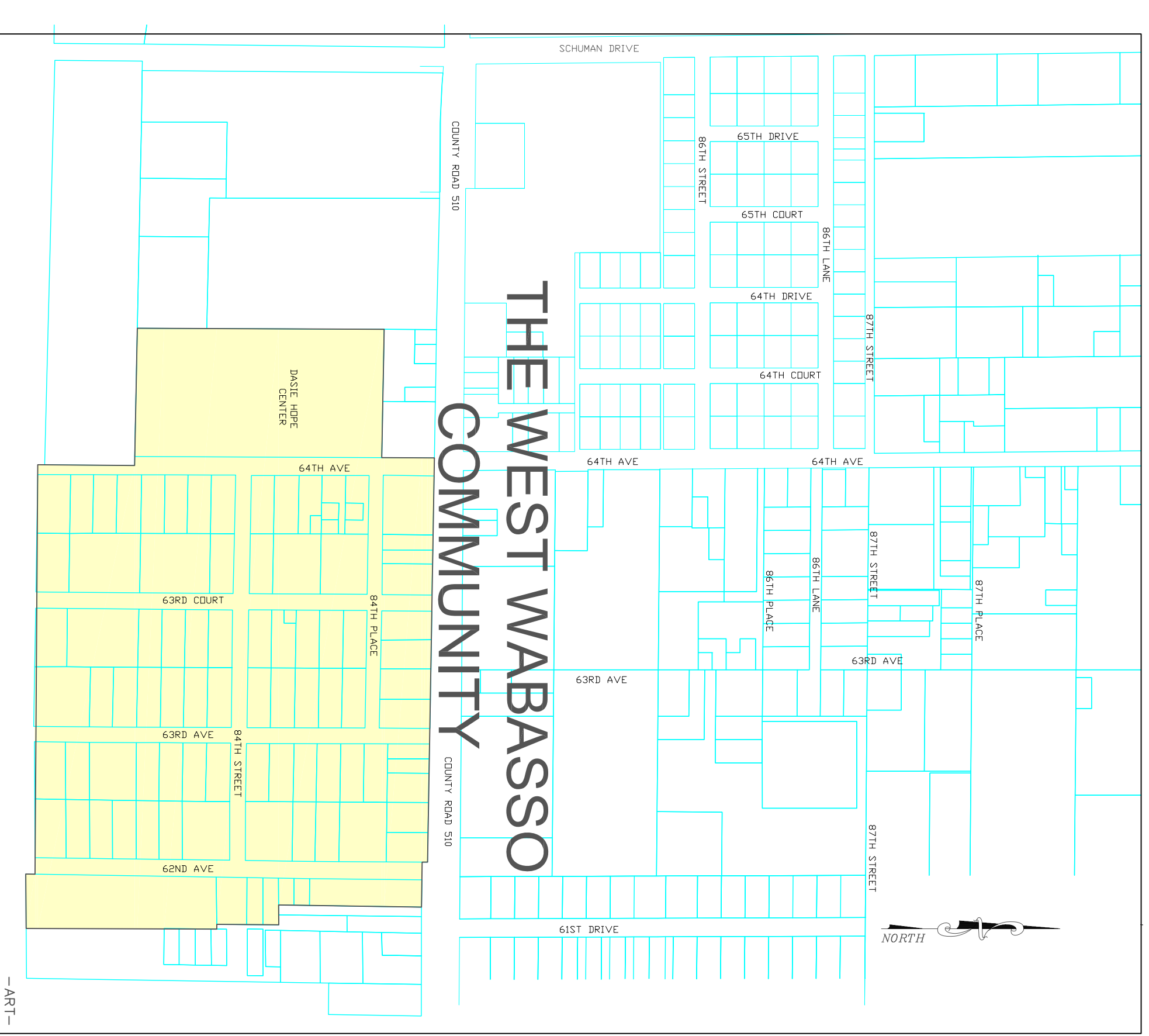
INDIAN RIVER COUNTY

WEST WABASSO COMMUNITY SEWER SYSTEM

GRAVITY SEWER PLAN – PHASE 2



LOCATION MAP



VICINITY MAP
PROJECT AREA SHOWN IN YELLOW

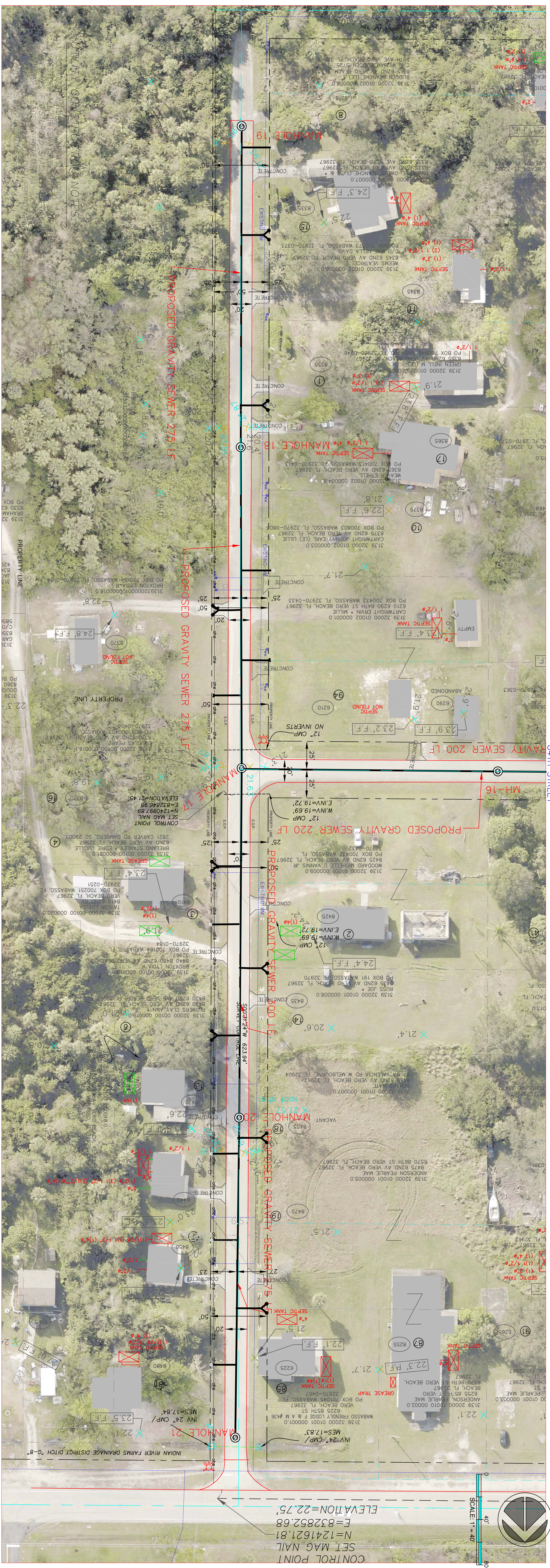
- INDEX OF SHEETS
1. COVER SHEET
 2. PROJECT PLAN – OVERALL VIEW
 3. DATUM
 - 4.-9. CONSTRUCTION PLANS AND PROFILES
 - 10.-14. DETAILS UTILITY CONSTRUCTION STANDARDS
 15. DETAILS STORMWATER CONTROL STANDARDS

REVIEWED AND APPROVED BY:

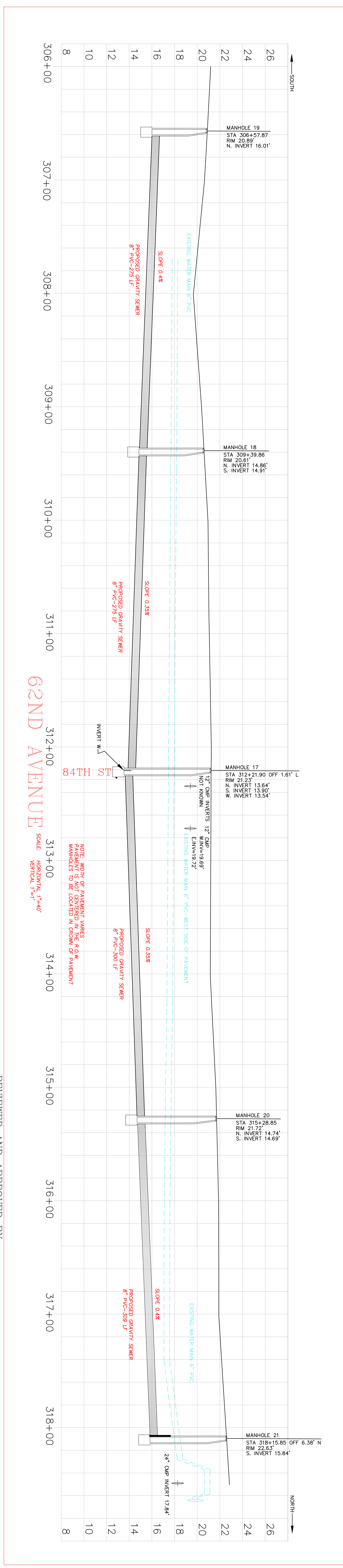
ARJUNA WERAGODA, P.L.P.E. 64267

COMMUNITY DEVELOPMENT BLOCK GRANT

SEE SHEET 9
84TH STREET



62nd AVENUE - SOUTH OF 85TH STREET

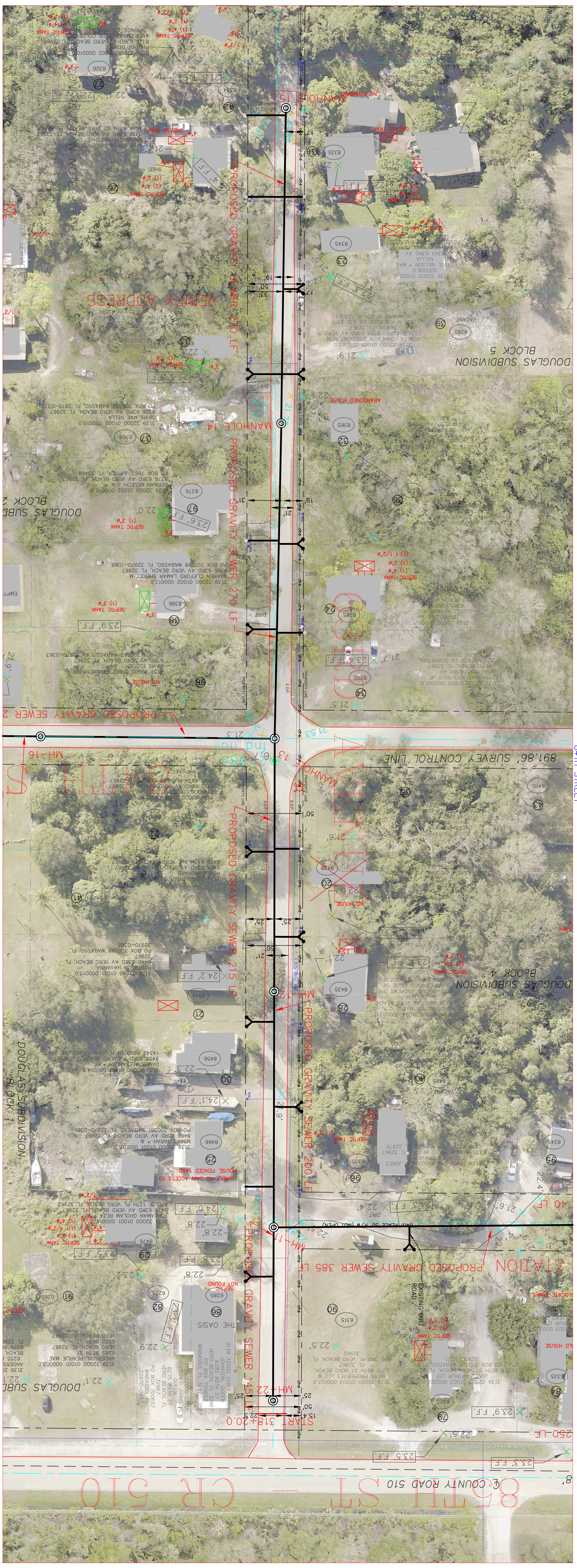


62ND AVENUE
SCALE: HORIZONTAL 1"=40'
VERTICAL 1"=4'

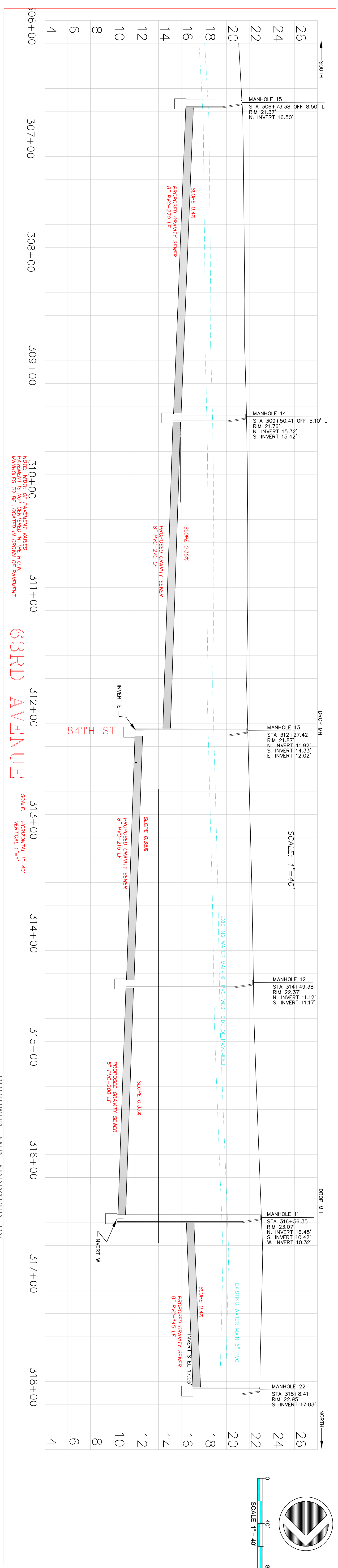
NOTE: CONTRACTOR SHALL NOTIFY PUBLIC WORKS DIVISION BEFORE COMMENCEMENT OF WORK IN THE RIGHT OF WAY

REVIEWED AND APPROVED BY: ARJUNA WERAGODA, FL P.E. 64267

Revision	Date	By	INDIAN RIVER COUNTY	DEPARTMENT OF	DESIGNED BY: -ART-	DATE: NOVEMBER 2015	WEST WABASSO PHASE 2	CONSTRUCTION PLAN & PROFILE	SHEET 4
REVISED PER TRC ENGINEERING COMMENTS	APRIL 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	CHECKED BY:	NOTED	GRAVITY SEWER SYSTEM	62ND AVENUE SOUTH OF COUNTY ROAD 510	OF 15
REVISED PER PRE-BID COMMENTS	SEP 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	APPROVED BY:	4103			



63rd Avenue - South of 85th Street SCALE: 1"=40'



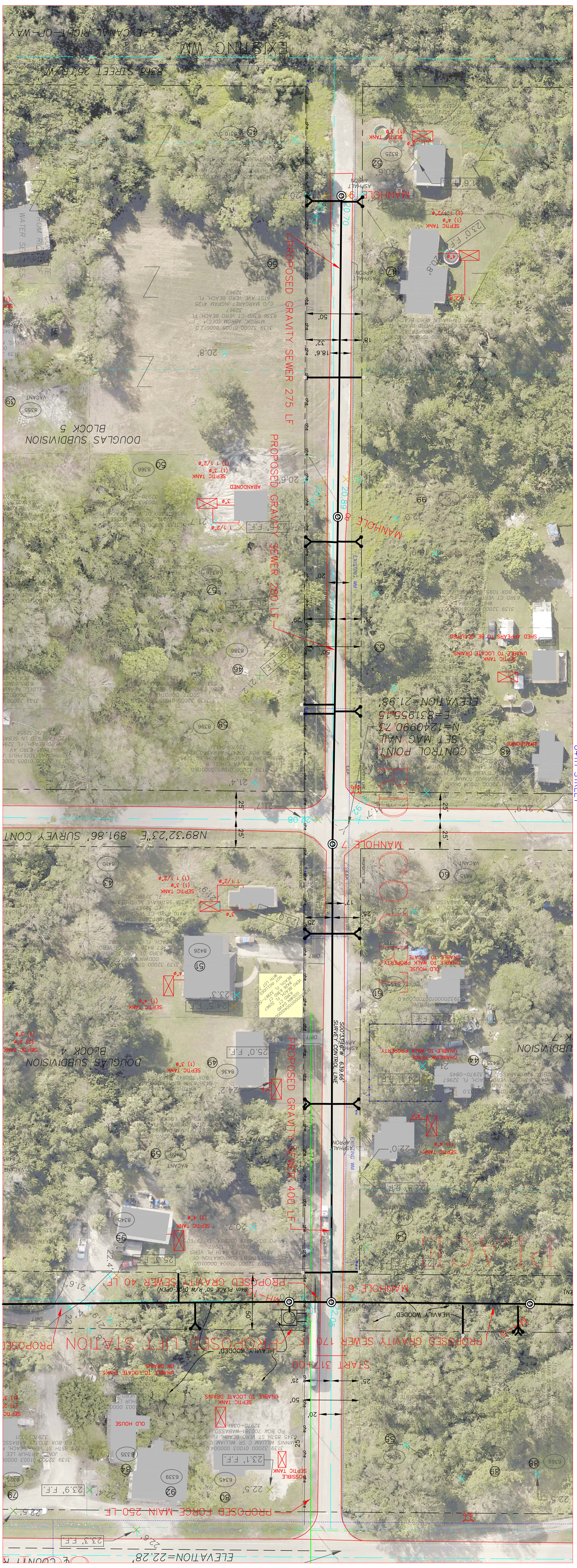
63RD AVENUE SCALE: HORIZONTAL 1"=40' VERTICAL 1"=10'

NOTE: CONTRACTOR SHALL NOTIFY PUBLIC WORKS DIVISION BEFORE COMMENCEMENT OF WORK IN THE RIGHT OF WAY

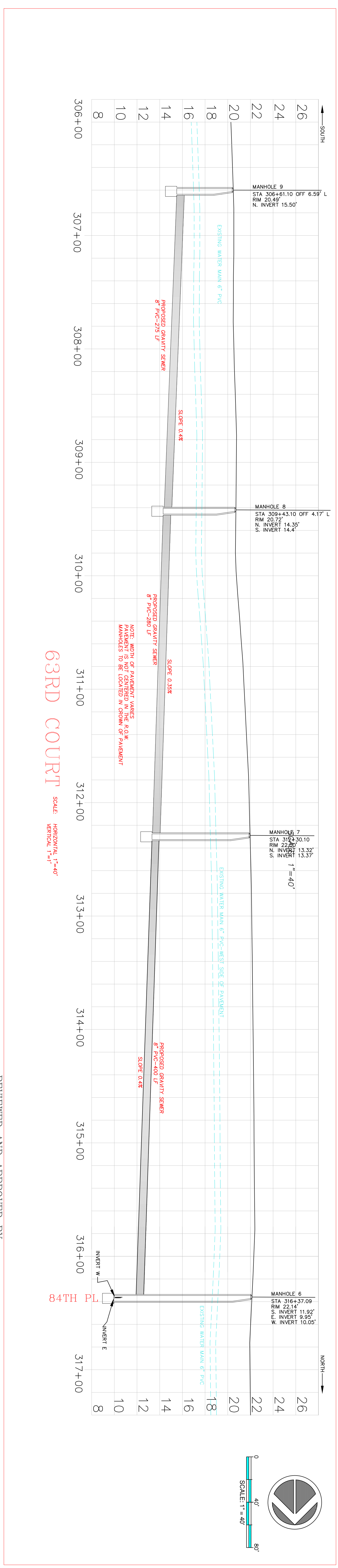
REVIEWED AND APPROVED BY: ARJUNA WERAGODA, FL P.E. 64267

Revision	Date	By	INDIAN RIVER COUNTY	DEPARTMENT OF	DRAWN BY: -ART-	DATE	WEST WABASSO PHASE 2	CONSTRUCTION PLAN & PROFILE	SHEET
REVISED PER IRC ENGINEERING COMMENTS	APRIL 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	DESIGNED BY: -ART-	NOVEMBER 2016	GRAVITY SEWER SYSTEM	63RD AVENUE SOUTH OF COUNTY ROAD 510	5
REVISED PER PRE-BID COMMENTS	SEP 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	CHECKED BY:	NOTED			OF 15
			VERO BEACH, FLORIDA 32980		APPROVED BY:	4103			

SEE SHEET 7
84TH STREET



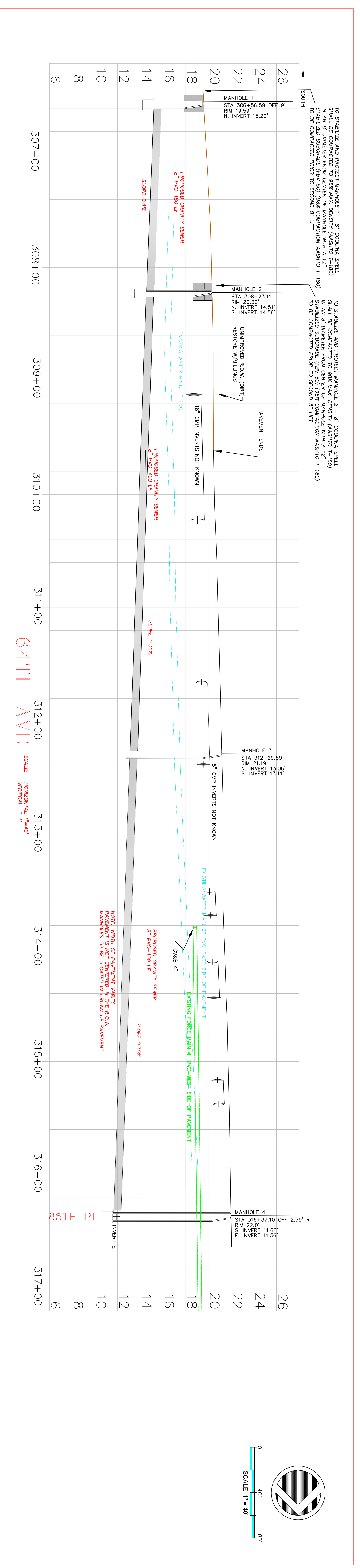
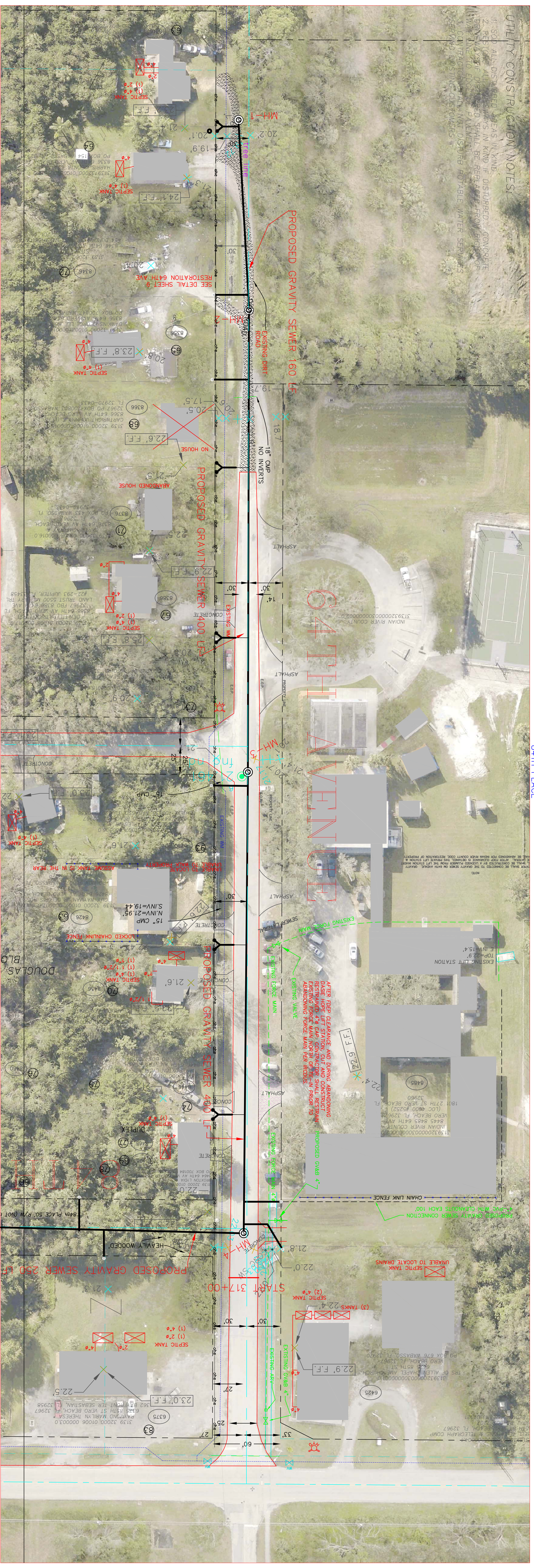
63rd COURT - SOUTH OF 85TH STREET SCALE: 1"=40'



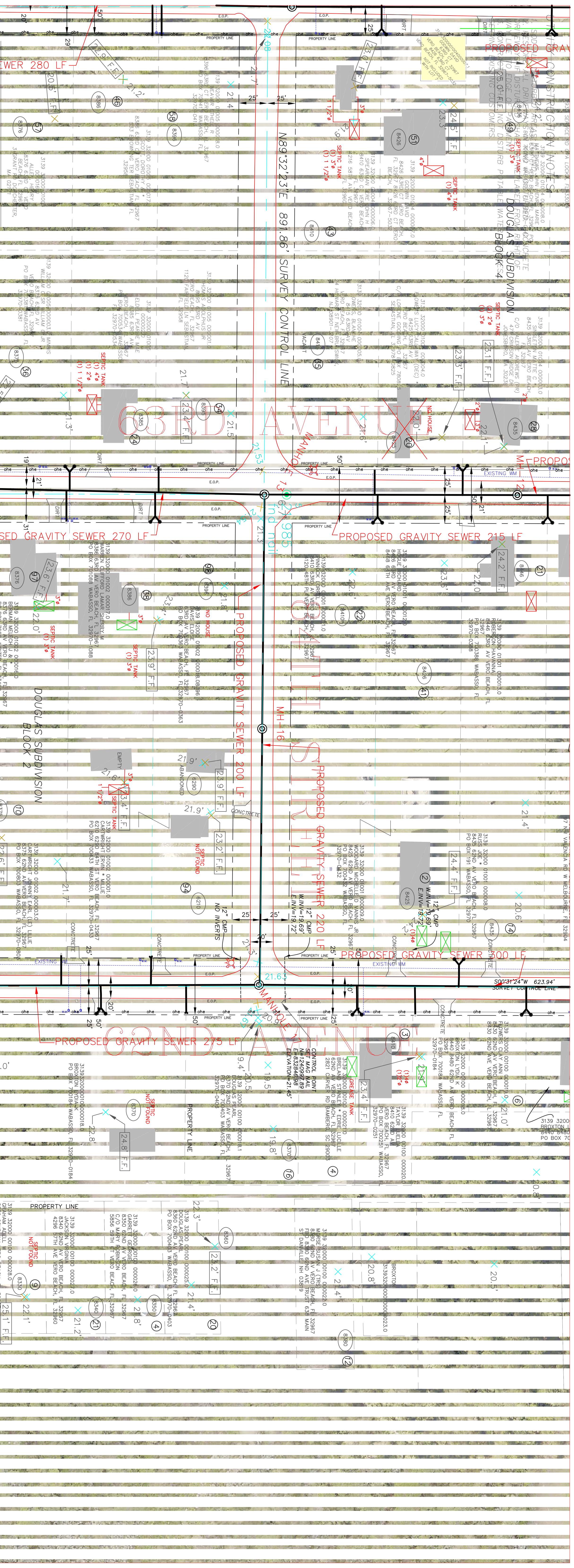
NOTE: CONTRACTOR SHALL NOTIFY PUBLIC WORKS DIVISION BEFORE COMMENCEMENT OF WORK IN THE RIGHT OF WAY

REVIEWED AND APPROVED BY: ARJUNA WERAGODA, FL P.E. 64267

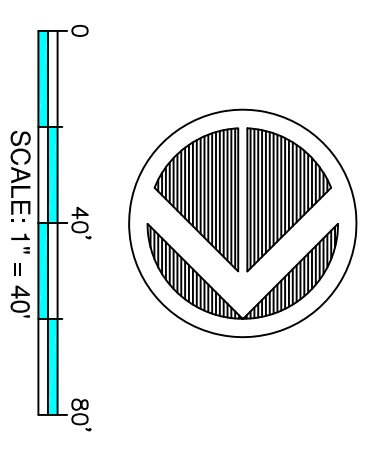
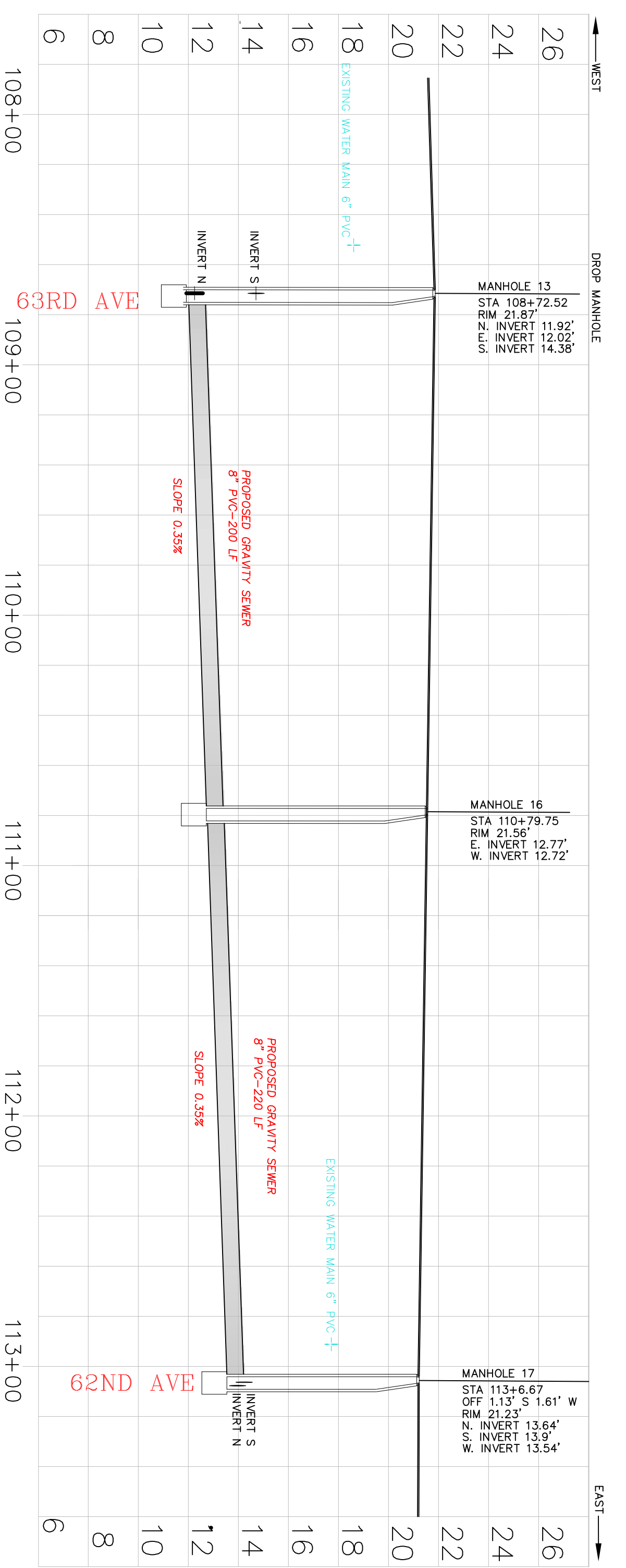
Revision	Date	By	INDIAN RIVER COUNTY	DEPARTMENT OF	DRAWN BY: -ART-	DATE: NOVEMBER 2016	WEST WABASSO PHASE 2	CONSTRUCTION PLAN & PROFILE	SHEET 6
REVISED PER IRC ENGINEERING COMMENTS	APRIL 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	DESIGNED BY: -ART-	SCALE: NOTED	GRAVITY SEWER SYSTEM	63RD COURT SOUTH OF COUNTY ROAD 510	OF 15
REVISED PER PRE-BID COMMENTS	SEP 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	CHECKED BY:	UCP No. 4103			



Revision	Date	By	INDIAN RIVER COUNTY	DEPARTMENT OF	DESIGNED BY: -ART-	DATE: NOVEMBER 2016	WEST WABASSO PHASE 2	CONSTRUCTION PLAN & PROFILE	SHEET 7
REVISED PER IRC ENGINEERING COMMENTS	APRIL 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	CHECKED BY:	SCALE: NOTED	GRAVITY SEWER SYSTEM	64TH AVENUE SOUTH OF COUNTY ROAD 510	OF 15
REVISED PER PRE-BID COMMENTS	SEP 2016	-ART-	INDIAN RIVER COUNTY	UTILITY SERVICES	APPROVED BY:	UPC No. 4103	GRAVITY SEWER SYSTEM	64TH AVENUE SOUTH OF COUNTY ROAD 510	OF 15



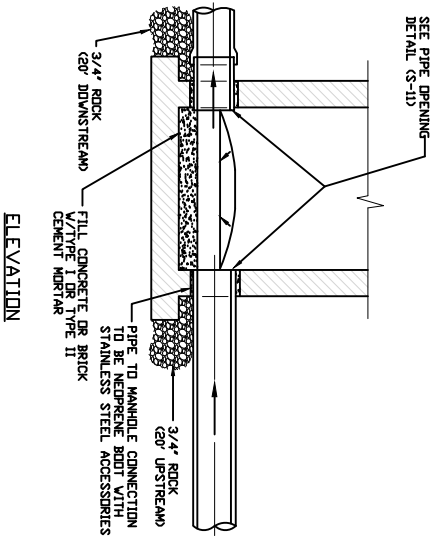
84TH STREET - SOUTH OF 85TH STREET SCALE: 1"=40'



NOTE: CONTRACTOR SHALL NOTIFY PUBLIC WORKS DIVISION BEFORE COMMENCEMENT OF WORK IN THE RIGHT OF WAY

REVIEWED AND APPROVED BY: ARJUNA WERAGODA, FL P.E. 64267

Revision	Date	By	INDIAN RIVER COUNTY	DEPARTMENT OF	DATE	WEST WABASSO PHASE 2	CONSTRUCTION PLAN & PROFILE
REVISED PER IRC ENGINEERING COMMENTS	APRIL 2016	-ART-	1801 27TH STREET VERO BEACH FLORIDA 32960	UTILITY SERVICES	NOVEMBER 2016	GRAVITY SEWER SYSTEM	85th STREET SOUTH OF COUNTY ROAD 510
REVISED PER PRE-BID COMMENTS	SEP 2016	-ART-	VERO BEACH FLORIDA 32960 (772) 567-8000	UTILITY SERVICES	NOTED	GRAVITY SEWER SYSTEM	85th STREET SOUTH OF COUNTY ROAD 510



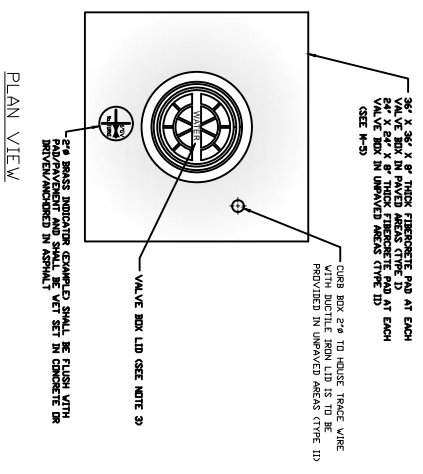
PIPE JOINT DETAIL AT MANHOLE

- NOTE
1. PIPE JOINT DETAIL IS TYPICAL FOR ALL PIPE TO MANHOLE CONNECTIONS
 2. ALL MATERIALS ARE TO BE PER IBCONS APPROVED MANUFACTURERS' PRODUCT LIST.
 3. 3/4" ROCK TO BE USED AS BEDDING FOR 20' UPSTREAM & DOWNSTREAM OF MANHOLE.

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

MANHOLE
EFFLUENT & INFLUENT

BRADING
NO. 12
M-12



NOTES

1. VALVE BOX LID SHALL BE PAINTED
BLUE - WATER
GREEN - FORCE MAINS
BROWN - SEWER
RED - RAIN
2. IN UNPAVED AREAS (SEE H-5, TYPE 1) A BRASS VALVE INDICATOR IS TO BE PROVIDED WITH ENGRAVED DESIGN OF VALVE LOCATION AND DESCRIPTION. (SEE EXAMPLE ABOVE) INDICATOR SHALL BE FLUSH WITH PAVEMENT.
3. IN PAVED AREAS (SEE H-5, TYPE 2) INDICATOR SHALL BE 1/2\"/>

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

VALVE BOX PAD

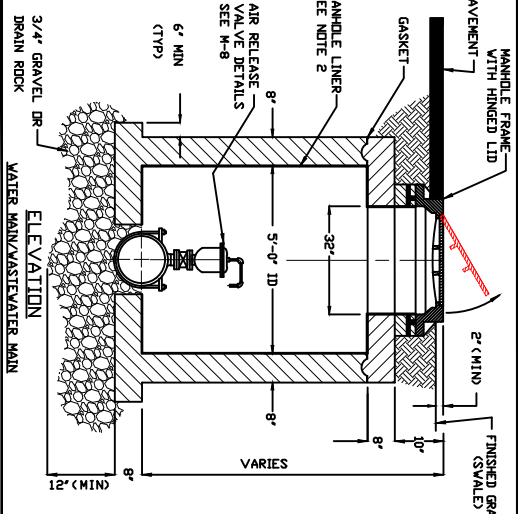
BRADING
NO. 6
M-6

RESTRAINED LENGTH IN FEET EACH SIDE OF PIPE CHECKED	RESTRAINED LENGTH IN FEET FOR REDUCER											
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
1/2"	0	0	0	0	0	0	0	0	0	0	0	0
3/4"	0	0	0	0	0	0	0	0	0	0	0	0
1"	0	0	0	0	0	0	0	0	0	0	0	0
1 1/4"	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2"	0	0	0	0	0	0	0	0	0	0	0	0
2"	0	0	0	0	0	0	0	0	0	0	0	0
2 1/2"	0	0	0	0	0	0	0	0	0	0	0	0
3"	0	0	0	0	0	0	0	0	0	0	0	0
4"	0	0	0	0	0	0	0	0	0	0	0	0
5"	0	0	0	0	0	0	0	0	0	0	0	0
6"	0	0	0	0	0	0	0	0	0	0	0	0
8"	0	0	0	0	0	0	0	0	0	0	0	0
10"	0	0	0	0	0	0	0	0	0	0	0	0
12"	0	0	0	0	0	0	0	0	0	0	0	0
14"	0	0	0	0	0	0	0	0	0	0	0	0
16"	0	0	0	0	0	0	0	0	0	0	0	0
18"	0	0	0	0	0	0	0	0	0	0	0	0
20"	0	0	0	0	0	0	0	0	0	0	0	0
24"	0	0	0	0	0	0	0	0	0	0	0	0
28"	0	0	0	0	0	0	0	0	0	0	0	0
32"	0	0	0	0	0	0	0	0	0	0	0	0
36"	0	0	0	0	0	0	0	0	0	0	0	0
40"	0	0	0	0	0	0	0	0	0	0	0	0
44"	0	0	0	0	0	0	0	0	0	0	0	0
48"	0	0	0	0	0	0	0	0	0	0	0	0
52"	0	0	0	0	0	0	0	0	0	0	0	0
56"	0	0	0	0	0	0	0	0	0	0	0	0
60"	0	0	0	0	0	0	0	0	0	0	0	0
64"	0	0	0	0	0	0	0	0	0	0	0	0
68"	0	0	0	0	0	0	0	0	0	0	0	0
72"	0	0	0	0	0	0	0	0	0	0	0	0
76"	0	0	0	0	0	0	0	0	0	0	0	0
80"	0	0	0	0	0	0	0	0	0	0	0	0
84"	0	0	0	0	0	0	0	0	0	0	0	0
88"	0	0	0	0	0	0	0	0	0	0	0	0
92"	0	0	0	0	0	0	0	0	0	0	0	0
96"	0	0	0	0	0	0	0	0	0	0	0	0
100"	0	0	0	0	0	0	0	0	0	0	0	0

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

RESTRAINING
SCHEDULE AND NOTES

BRADING
NO. 3
M-3



NOTES

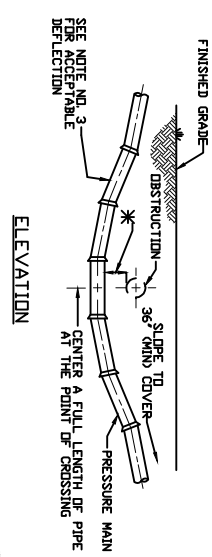
1. AIR RELEASE VALVE IS TO BE LOCATED INSIDE A CONCRETE MANHOLE WITH THE VALVE LID. ALL MATERIALS PER IBCONS APPROVED MANUFACTURERS' PRODUCT LIST.
2. MANHOLES FOR SEWER FORCE MAINS SHALL BE LINED ALL LINING MATERIAL SHALL BE PER INDIAN RIVER COUNTY APPROVED MANUFACTURERS' PRODUCT LIST.
3. SEE AIR RELEASE VALVE DETAIL (M-8)
4. SEE TRACER WIRE DETAIL (M-13)
5. WASTEWATER LIDS SHALL BE VENTED.

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

BELOW GROUND
AIR RELEASE VALVE MANHOLE

(AUTOMATIC - WATER/WASTEWATER)

BRADING
NO. 7
M-7



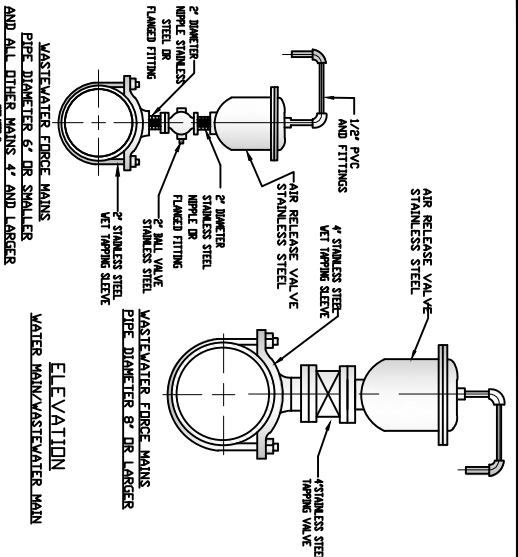
NOTES

1. *NEW OR REPAIRED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY, VACUUM TYPE SANITARY SEWER, STORM SEWER OR PRESSURE TYPE SANITARY SEWER, WASTEWATER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF PIPE IS AT LEAST 12\"/>
- 2. AT UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE AND BELOW THE OTHER PIPE. THE OTHER PIPE SHALL BE ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL OTHER PIPES. JOINTS SHALL BE PERMANENTLY SEALED AND THE JOINTS SHALL BE AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER.
- 3. CONSTRUCT STANDARD CROSSING NOT TO EXCEED 75% OF THE MANUFACTURERS' MAXIMUM JOINT DEFLECTION.
- 4. OTHER METHODS OF RESTRAINT MAY BE USED AS APPROVED BY IBCONS ENGINEERING.
- 5. SEE TRACER WIRE DETAIL M-13
- 6. ALL WATER AND SEWER UTILITIES SHALL BE LOCATED A MINIMUM HORIZONTAL SEPARATION EQUAL TO THE DEPTH OF THE PIPE PLUS THE DIAMETER OF THE PIPE. SEPARATION SHALL BE PERMANENT AND THE SEPARATION SHALL BE EQUAL TO FOUR (4) FEET FROM ANY UNDERGROUND UTILITIES (IE. GAS MAINS, TELEPHONE LINES, CABLE LINES, IRRIGATION MAINS, ETC.)

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

UTILITY CROSSING

BRADING
NO. 4
M-4



NOTES

1. AUTOMATIC AIR RELEASE VALVE TO BE LOCATED ONLY WHERE CONDITIONS MAKE IT INACCESSIBLE OR AS REQUIRED BY THE IBCONS.
2. AIR RELEASE RISERS TO BE IN A VERTICAL POSITION AND SHALL BE PERMANENTLY SEALED AND THE JOINTS SHALL BE AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER.
3. SEE TRACER WIRE DETAIL M-13
4. IF FORCE MAIN IS 8\"/>

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

ABOVE GROUND
AIR RELEASE VALVE DETAIL

(AUTOMATIC - WATER/WASTEWATER)

BRADING
NO. 8
M-8

REVIEWED AND APPROVED BY:

COMMUNITY DEVELOPMENT BLOCK GRANT

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

WEST WABASSO PHASE 2
GRAVITY SEWER SYSTEM

64TH AVENUE SOUTH OF COUNTY ROAD 510

CORDON E. SPARKS, FL P.E. 23161

REVISION
REVISED PER IRC ENGINEERING COMMENTS

Date: APRIL 2016


By: [Signature]

BRADING NO. 11 OF 15

GENERAL INFORMATION REQUIREMENTS

- All As-Built Record drawings shall meet the minimum requirements of the Chapter A4-17, Florida Administration Code pursuant to section 472 of the Florida Statutes.
- All state plane coordinates shall be based on the Florida State Plane Horizontal data (East Zone), or current datum adopted by Indian River County.
- All elevations shown shall be based on 1988 NAVD.
- All As-Built Record drawings shall be tied to a minimum of one (1) permanent reference monument (P.R.M.) at the end of each project. One P.R.M. shall be tied to a minimum of one (1) section corner or other permanent monument shown on the drawing next to the P.R.M. used.
- Horizontal Control Monumentation for utility lines shall be a minimum of two (2) points at a maximum of 1,400 feet between points and shown on all plans.
- Vertical Control (when required) for linear utility lines, such as sewer, shall have a minimum of 1,100 feet between existing construction or established benchmarks.
- All surveys that are required for the use of engineering design, and are located within a distance of one (1) mile from any Indian River County Global Positioning System (GPS) control project monument, shall be tied into the GPS monument from one (1) permanent reference point or the subdivision corner that is along the survey route and shall then be tied to the survey base line.
- All existing As-Built Record drawings (24"x36") shall state in 1" lettering "AS-BUILT" and the datum used in 1" lettering in the lower right hand side of the drawing original and/or copies along with as-built date. All incoming As-Built Record drawings shall be received on a CD, as an electronic copy, AutoCAD 2012 format, or latest version, with a tie to a minimum of two (2) stable plane coordinates. (NOTE: Prior to submitting the electronic copy, one (1) copy of each as-built shall be submitted for review and approval. The electronic copy shall be submitted with the original hard copy. The original hard copy shall be submitted as-built shall be submitted. All As-Built Record drawings shall be in a minimum scale of 1"=40'.
- A minimum text size of 1/8" is required on all construction/survey and as-built record drawings.
- All As-Built Record drawings shall be certified by the project engineer or contracting surveyor.
- All As-Built Record drawings shall clearly depict as-built utility lines that were constructed along with their respective easement (if required). As-Built Record drawings will not be accepted unless the vendor provides a "TO BE CONSTRUCTED" terminology which is acceptable.
- All as-built utility construction located within the right-of-way, easements and alle shall be tied to the respective right-of-way, easements, etc. every 1,000 feet and change of direction.
- All As-Built Record drawings shall be complete and approved before commencement of field work.
- Baseline of construction and station of items to be located on the center of the roadway. Baseline stationing shall be every 100', control points set at every 500' and at angle change of direction.
- All As-Built utility lines shall be shown with a wider, solid line.
- Top of pipe elevations & stationing to be typed, listed, sealed & submitted by the engineer for locating the air release valves as construction proceeds.
- Shown with a thin dashed line, top elevations of As-Built utility lines and existing utility lines shall be shown for all utility crossings.

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES




AS-BUILT RECORD
DRAWINGS

DRAWING
NO.
M-15

GENERAL INFORMATION REQUIREMENTS

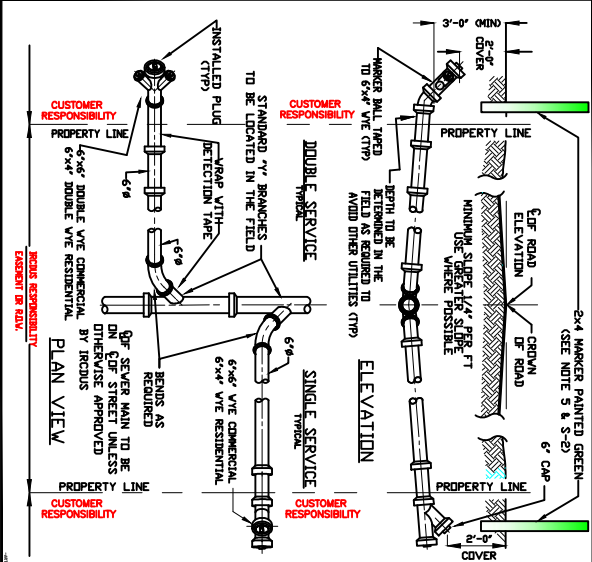
- Existing right-of-way limits and/or easements within the limits of construction.
- Survey baseline stationing every 100' control points set every 500', and at angle change of direction.
- Show cross section elevations at grade every 100' for gravity sewer the construction and 50' for water line and force main construction. Elevations that reflect any significant change in grade between the previously stated footage shall be shown on plans.
- Existing parcels, tracts, and lot corner locations shown with front footage dimensions per plat when plotted. If construction projects along back of lots, then show back lot dimensions.
- Existing roadway edge of pavement or edge of dirt road.
- Existing utilities as located in field (water, sewer, telephone, electric, cable TV, etc.). (NOTE: Sunshrine One to be contacted by surveying firm prior to survey locate, with the intent of county excavation.)
- Existing utilities as associated with number 5 above (example: valves, meters, manholes, etc.)
- Existing curbs, driveway widths and types.
- Existing drainage pipe crossings and driveway culverts (type, size and invert elevations)
- Existing swales and/or ditches and elevations every 100' at top and bottom if within area of construction.
- Existing fences.
- Existing trees and/or shrubbery.
- Existing trees and/or shrubbery.
- All other non-moveable items such as mailboxes, flag poles, etc.
- All street names.
- All commercial and singlefamily residential must have parcel ID indicated on the plan.
- All projects, which utilize lift stations, shall specify on plans as to whether or not subject lift stations are to remain private or are to be dedicated to the county.
- All fire hydrants and valves shall be located with site plane coordinates, station number and off-set and shall be clearly identified on the as-built drawing.
- All valves shall be clearly identified by size, type, top elevation and direction/number of turns to open or close each valve.
- Horizontal directional boxes shall have a profile or cross section drawing and include the bore log.
- The contractor is to provide the name of business or residential, street address and tax ID number for all properties adjacent to line easements.

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES




AS-BUILT RECORD
DRAWINGS

DRAWING
NO.
M-16



INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

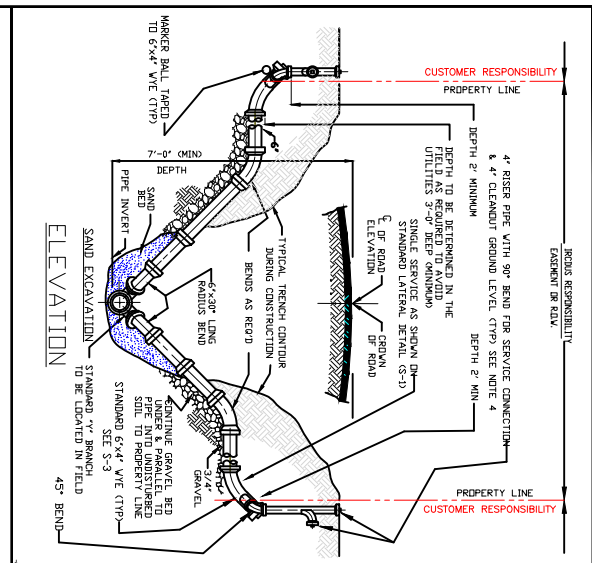


STANDARD LATERAL
(SHALLOW SEWER)


DRAWING
NO.
S-1

NOTE

- SMALLER SEWER LATERALS SHALL BE A MINIMUM OF 6" IN DIAMETER.
- SMALLER SEWER LATERALS SHALL BE A MINIMUM OF 6" IN DIAMETER.
- ALL MATERIALS ARE TO BE PER IRC/DAS APPROVED MANUFACTURERS' PRODUCT LIST.
- MANHOLE BUILTS TO BE TYPED TO 6"x4" 24" BELOW FINISHED GRADE.
- PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR RISER PIPE WITH 90° BEND FOR SERVICE CONNECTION AND FOR CUTTING SEWER ELEMENT TO FINISH GRADE PRIOR TO CONNECTION. (SEE S-3 BE DETAIL)



INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

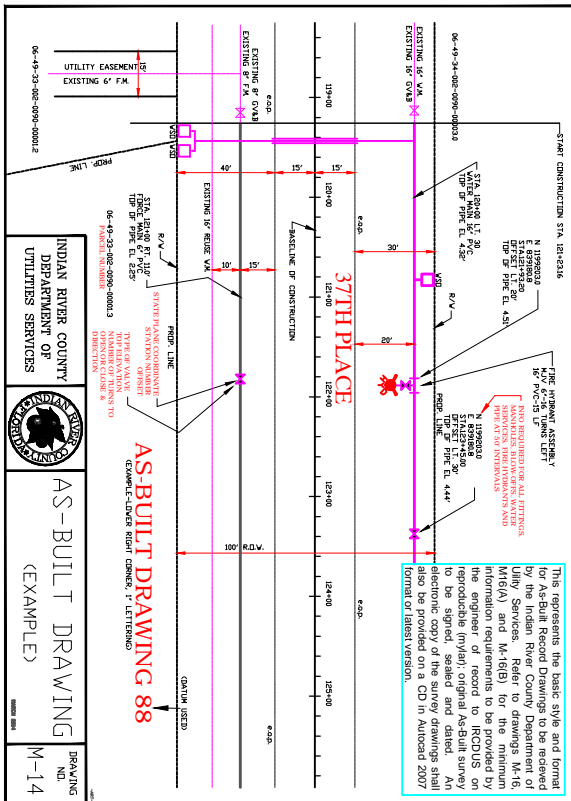


MODIFIED RISER LATERAL
(DEEP SEWER)

DRAWING
NO.
S-2

NOTES

- 3/4" GRAVEL BEDDING SHALL BE USED FOR EXCAVATION IN ROCK.
- SMALLER SEWER LATERALS SHALL BE A MINIMUM OF 6" IN DIAMETER.
- ALL MATERIALS ARE TO BE PER IRC/DAS APPROVED MANUFACTURERS' PRODUCT LIST.
- MANHOLE BUILTS TO BE TYPED TO 6"x4" 24" BELOW FINISHED GRADE.
- PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR RISER PIPE WITH 90° BEND FOR SERVICE CONNECTION AND FOR CUTTING SEWER ELEMENT TO FINISH GRADE PRIOR TO CONNECTION.



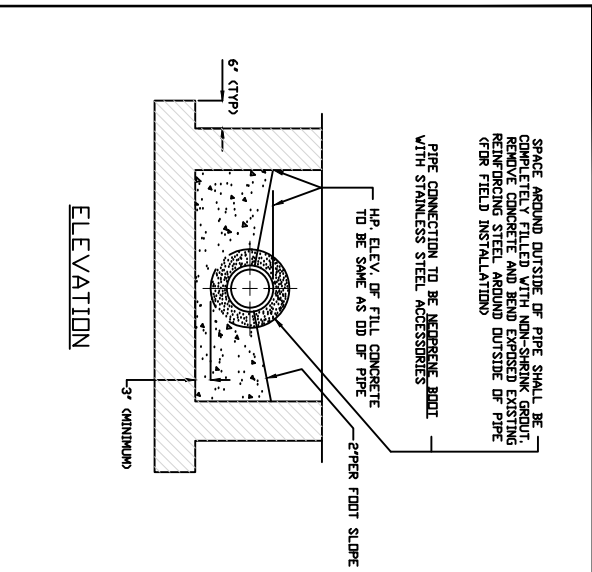
INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES




AS-BUILT DRAWING
(EXAMPLE)

DRAWING
NO.
M-14

This represents the basic size and format for all drawings. For more information on the drawing process, refer to the drawing standards and specifications provided by the Indian River County Department of Utilities Services. Refer to drawings M-16, M-16(A) and M-16(B) for the minimum information requirements to be provided by the contractor. The contractor shall provide a reproducible (inverted, original As-Built survey) to be signed, sealed and dated. An electronic copy of the survey drawings shall also be provided on a CD in AutoCAD 2007 format.



INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES

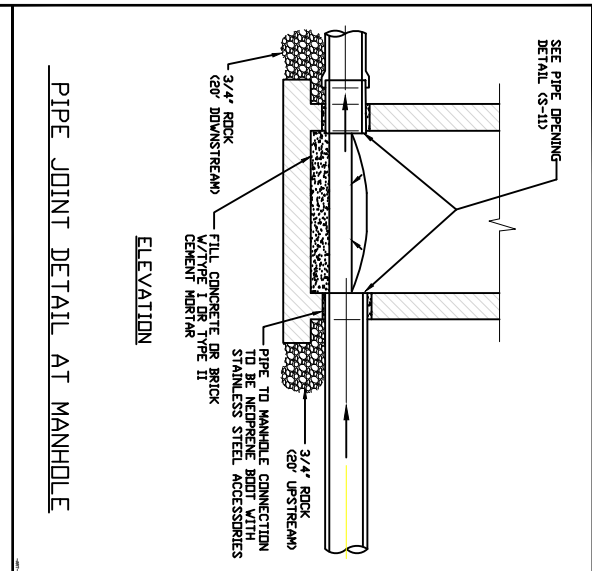


PIPE OPENING DETAIL


DRAWING
NO.
S-11

NOTES

- ALL MATERIALS ARE TO BE PER IRC/DAS APPROVED MANUFACTURERS' PRODUCT LIST.



INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES



MANHOLE
EFFLUENT & INFLUENT

DRAWING
NO.
S-12

NOTE

- PIPE JOINT DETAIL IS TYPICAL FOR ALL PIPE TO MANHOLE CONNECTIONS.
- ALL MATERIALS ARE TO BE PER IRC/DAS APPROVED MANUFACTURERS' PRODUCT LIST.
- 3/4" ROCK TO BE USED AS BEDDING FOR 6" UPSTREAM & DOWNSTREAM OF MANHOLE.

COMMUNITY DEVELOPMENT BLOCK GRANT 12DB-OH-10-XX-XX-NO1

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES



REVISION

Revision	Date	By
REVISED PER IRC ENGINEERING COMMENTS	APRIL 2016	-ART-

1801 27TH STREET
VERO BEACH, FL 32980
(787) 507-8000

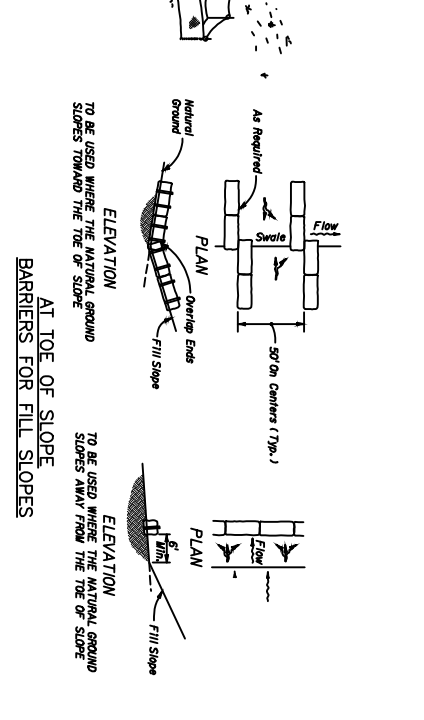
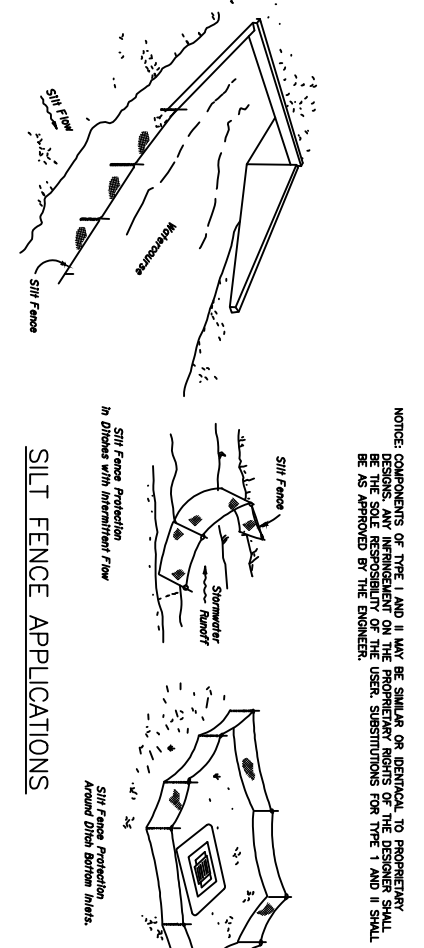
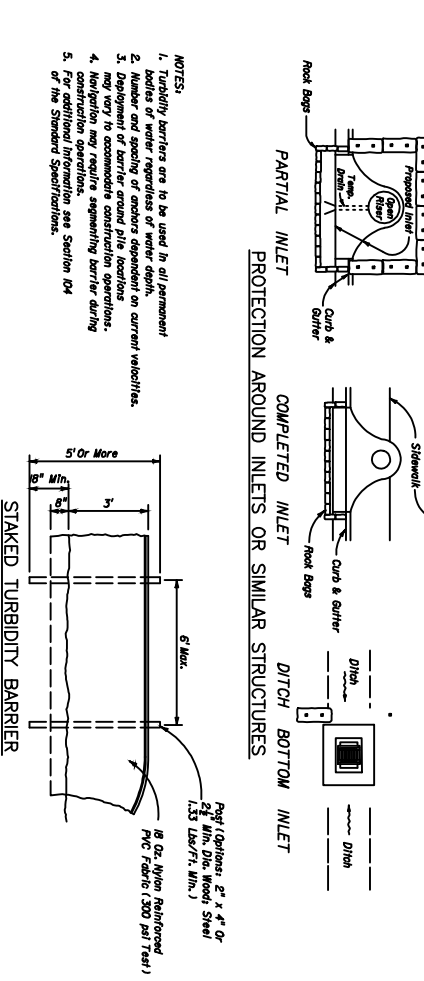
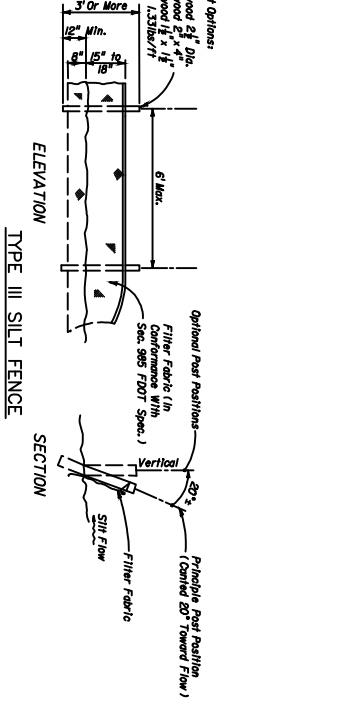
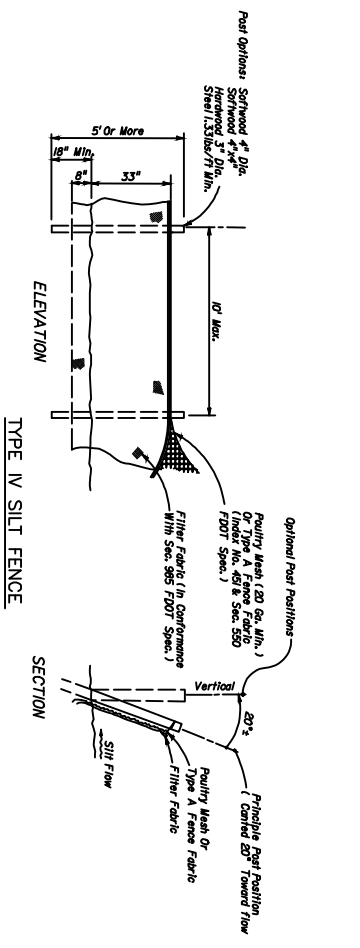
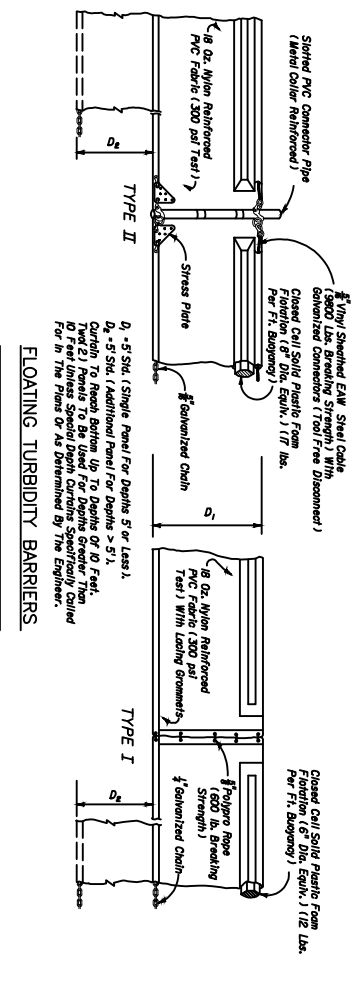
DEPARTMENT OF
UTILITIES SERVICES

WEST WABASSO PHASE 2
GRAVITY SEWER SYSTEM

UTILITY CONSTRUCTION STANDARDS
64TH AVENUE SOUTH OF COUNTY ROAD 510

GORDON E. SPARKS, P.E. 23161

REVIEWED AND APPROVED BY:



GENERAL NOTES

NOTICE TO CONTRACTORS

In order to secure permits to construct this project, the OWNER may have obtained an N.P.D.E.S. (Generic Permit for Stormwater Discharge from Large and Small Construction Activities) from the Florida Department of Environmental Protection, Construction Activities Section. The contractor shall be responsible for obtaining the project's N.P.D.E.S. permit and may file a "Notice of Termination" (N.O.T.) of the N.P.D.E.S. "Generic Permit" coverage. Contractor shall within ten (10) days submit a NEW "Notice of Intent" (N.O.I.) to the F.D.E.P. and "Compliance Engineering System" with copies to owner and engineer.

The completion of this project by the CONTRACTOR requires compliance with the State of Florida Department of Environmental Protection "Generic Permit for Stormwater Discharge from Large and Small Construction Activities" per DEP document number 62-821-300(4)(G). It is the CONTRACTOR'S responsibility to obtain a copy of the permit and read it carefully. The permit contains the following information:

Permit: The CONTRACTOR shall be considered the "OPERATOR" as defined herein. The OPERATOR is defined as: The legal entity that owns or operates the construction activity and has the authority to control those activities of the permit. The permit contains the following information:

1. Prepare Stormwater Pollution Prevention Plan and maintain the site in accordance with that plan.

2. File a "Notice of Intent" (N.O.I.) (DEP Form 62-821-300(4) (G)) (including applicable fee) with the Florida Department of Environmental Protection (F.D.E.P.) and post the N.O.I. or a letter from the DEP confirming coverage under the permit shall be posted on the site for public viewing.

3. Provide a "Qualified Inspector" perform the required inspections in accordance with the State of Florida Generic Permit for Stormwater Discharge from Large and Small Construction Activities, DEP Doc #62-821 (4) (G).

4. Before conducting any project activities the OPERATOR and all subcontractors shall sign and provide to the FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, the OWNER/DEVELOPER, and the ENGINEER a copy of the following certification:

1. certify under penalty of law that I, understand, and shall comply with, the terms and conditions of the State of Florida Generic Permit for Stormwater Discharge from Large and Small Construction Activities (DEP Doc. #62-821-300(4) (G)) and the Stormwater Pollution Prevention Plan;

2. The certification must include the name and title of the person providing the signature; the name, address, and telephone number of the person providing the signature; the name, address, and telephone number of the person providing the signature; the name, address, and telephone number of the person providing the signature;

5. Within 14 days of a different OPERATOR taking responsibility of the construction activities a "Notice of Termination" (DEP Form 62-821-300(6)) shall be submitted to the F.D.E.P. in accordance with the terms and conditions of the permit. The N.O.T. shall be signed in accordance with this permit.

6. Within 14 days of final stabilization of the site, OPERATOR shall file a "Notice of Termination" (DEP Form 62-821-300(6)), to the F.D.E.P., with copies to the OWNER and ENGINEER.

GRUBBING, CLEARING AND TREE REMOVAL/LAND CLEARING PERMITS

This site requires a permit for tree removal, grubbing and land clearing. The contractor shall post a copy of the permit at the site prior to commencement of grubbing, clearing or land clearing.

GRUBBING

The application for a grubbing permit shall be filed with the building department on the day the permit is issued. The application shall include a copy of the permit, a site plan showing the location of the grubbing, and a copy of the permit. The application shall be filed with the building department on the day the permit is issued.

TREE REMOVAL AND LAND CLEARING

The application for a tree removal permit or land clearing permit shall be filed with the building department on the day the permit is issued. The application shall include a copy of the permit, a site plan showing the location of the tree removal, and a copy of the permit. The application shall be filed with the building department on the day the permit is issued.

PERMITS

The removal of a specimen tree requires a removal permit from the building department.

PROHIBITED AND UNDESIRABLE EXOTIC VEGETATION

All prohibited and undesirable exotic vegetation must be removed by the developer. The contractor shall be responsible for the removal of this vegetation. The contractor shall be responsible for the removal of this vegetation.

STORMWATER POLLUTION PREVENTION PLAN

NATURE OF CONSTRUCTION ACTIVITY: Paving and Drainage Improvements

SEQUENCE OF CONSTRUCTION EVENTS:

1. Erosion control
2. Clear vegetation from R/W
3. Install drainage structures and pipework
4. Add base road
5. Add base road
6. Pave
7. Sod

TOTAL AREA OF THE SITE: 4.07 Acres

AREA TO BE DEVELOPED: 4.07 Acres

SOIL DESCRIPTION: WINTER LOAMY FINE SAND, WINDER FINE SAND

BEST MANAGEMENT PRACTICES (BMP'S)

TEMPORARY AND PERMANENT STABILIZATION

No temporary seeding will be placed on project until final grading of the grade. Permanent seed will be placed following asphalt and final dressing of the roads.

TEMPORARY STORMWATER CONTROLS

Turbidity barriers will be placed in the Sub-letted B-B Canal.

PERMANENT STORMWATER CONTROLS

Normal runoff is routed to Stormwater management treats with overflow structures routed to Sub-letted B-B Canal.

POTENTIAL POLLUTANTS: All construction debris will be hauled off-site to the landfill.

INSPECTIONS: The job foreman will inspect all points of discharge, all disturbed areas of construction that have not been stabilized, and all constructed areas of least once every 7 calendar days or after a storm event that is 0.50 inches or more of rain. The contractor shall be responsible for the inspection of the site. The contractor shall be responsible for the inspection of the site.

SILT FENCE APPLICATIONS

NOTES FOR SILT FENCES

1. Type III Silt Fence to be used at most locations. Where used in ditches, the silt fence shall be placed in the ditch with the top of the silt fence at least 25 feet above the ditch bottom.
2. Type IV Silt Fence to be used where large sediment loads are anticipated. The silt fence shall be placed in the ditch with the top of the silt fence at least 25 feet above the ditch bottom.
3. Do not construct silt fence across permanent flowing watercourses. Silt fences shall be placed in the ditch with the top of the silt fence at least 25 feet above the ditch bottom.
4. Where used as slope protection, Silt Fence is to be constructed on 0% slope. Silt Fence to be placed under the contract unit price for Sloped Silt Fence. (U1)

NOTES FOR BAILED HAY OR STRAW BARRIERS

NOTES FOR BAILED HAY OR STRAW BARRIERS

1. Type I and II Barriers should be spaced in accordance with Chart 1, Sheet 1-15.
2. Hay bales shall be baled 3' to 4' and anchored with (2) two 1"x2" (or 1" dia.) 4"x4" wood stakes. Stakes of other material or shapes providing equivalent strength may be used if approved by the Engineer. Stakes other than wood shall be placed in the ditch with the top of the silt fence at least 25 feet above the ditch bottom.
3. Roll and mat shall be 2"x4" sections of One (1) inch protective providing equivalent strength may be used if approved by the Engineer.
4. Adjacent bales shall be baled firmly together. Unavoidable gaps shall be filled with hay or straw.
5. Where used in conjunction with silt fence, hay bales shall be placed on the up-slope side of the fence.
6. Bales to be placed under the contract unit price for Baled Hay or Straw. Erosion control shall be placed under the contract unit price for Sand Baggings, or Rock Baggings.

COMMUNITY DEVELOPMENT BLOCK GRANT

Revision	Date	By
REVISED PER IRC ENGINEERING COMMENTS	APRIL 2016	-ART-

DEPARTMENT OF	INDIAN RIVER COUNTY
UTILITY SERVICES	1600 7TH STREET VERO BEACH, FLORIDA 32986 (888) 567-8000

DESIGNED BY	DATE	RECORDED BY
DECIDED BY	NO SCALE	
APPROVED BY	UP No. 4103	

WEST WABASSO PHASE 2	GENERAL STORMWATER REQUIREMENTS
GRAVITY SEWER SYSTEM	64TH AVENUE SOUTH OF COUNTY ROAD 510

GORDON E. SPARKS, FL P.E. 23161	SHEET 15 OF 15
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REVIEWED AND APPROVED BY: