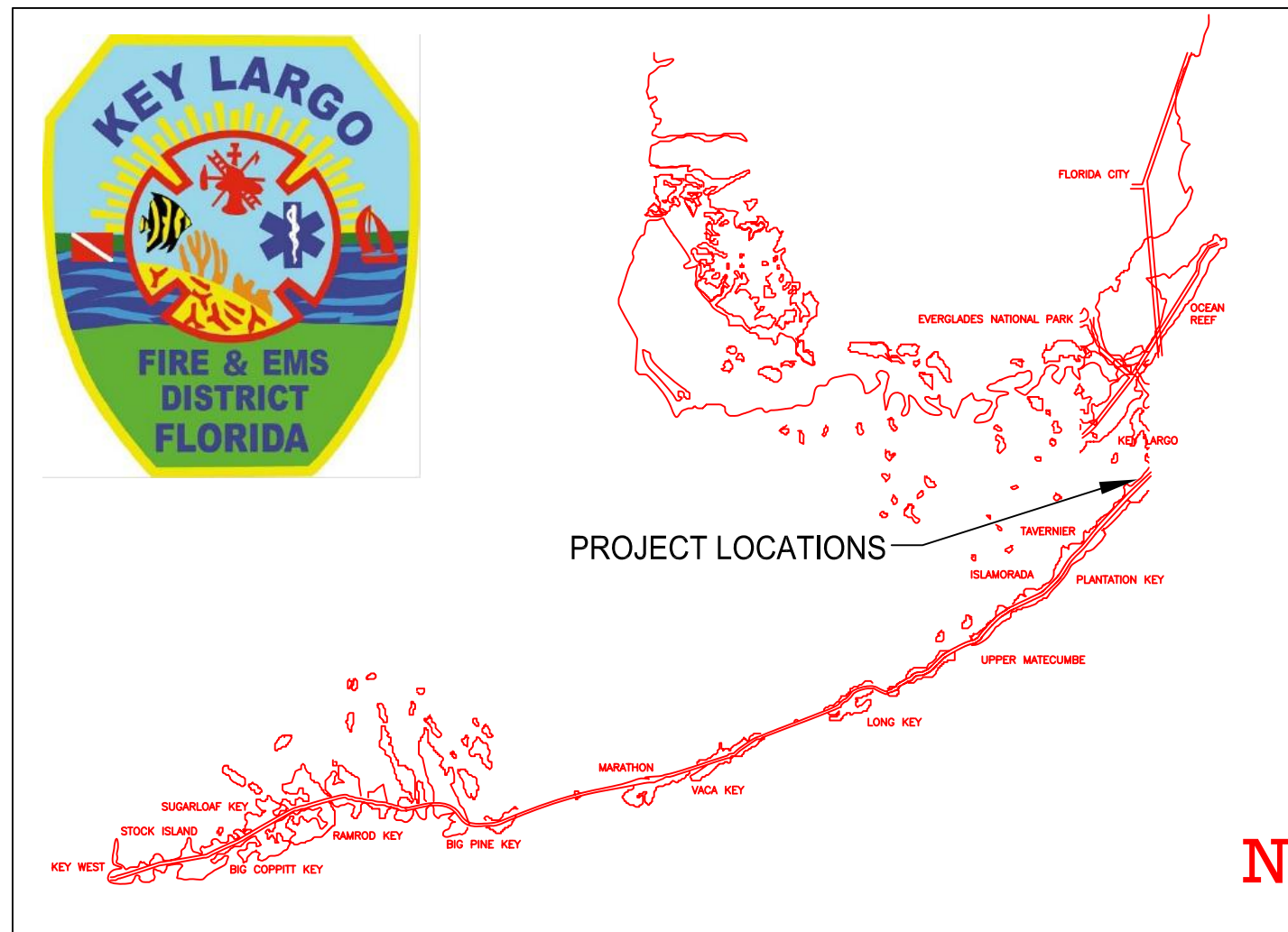


Key Largo Fire Hydrants Installation Key Largo, Florida Various Subdivisions



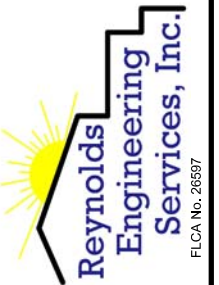
LOCATION MAP

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Not for Construction

Revisions:

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305-394-5987
jim@reynoldsengeering.com

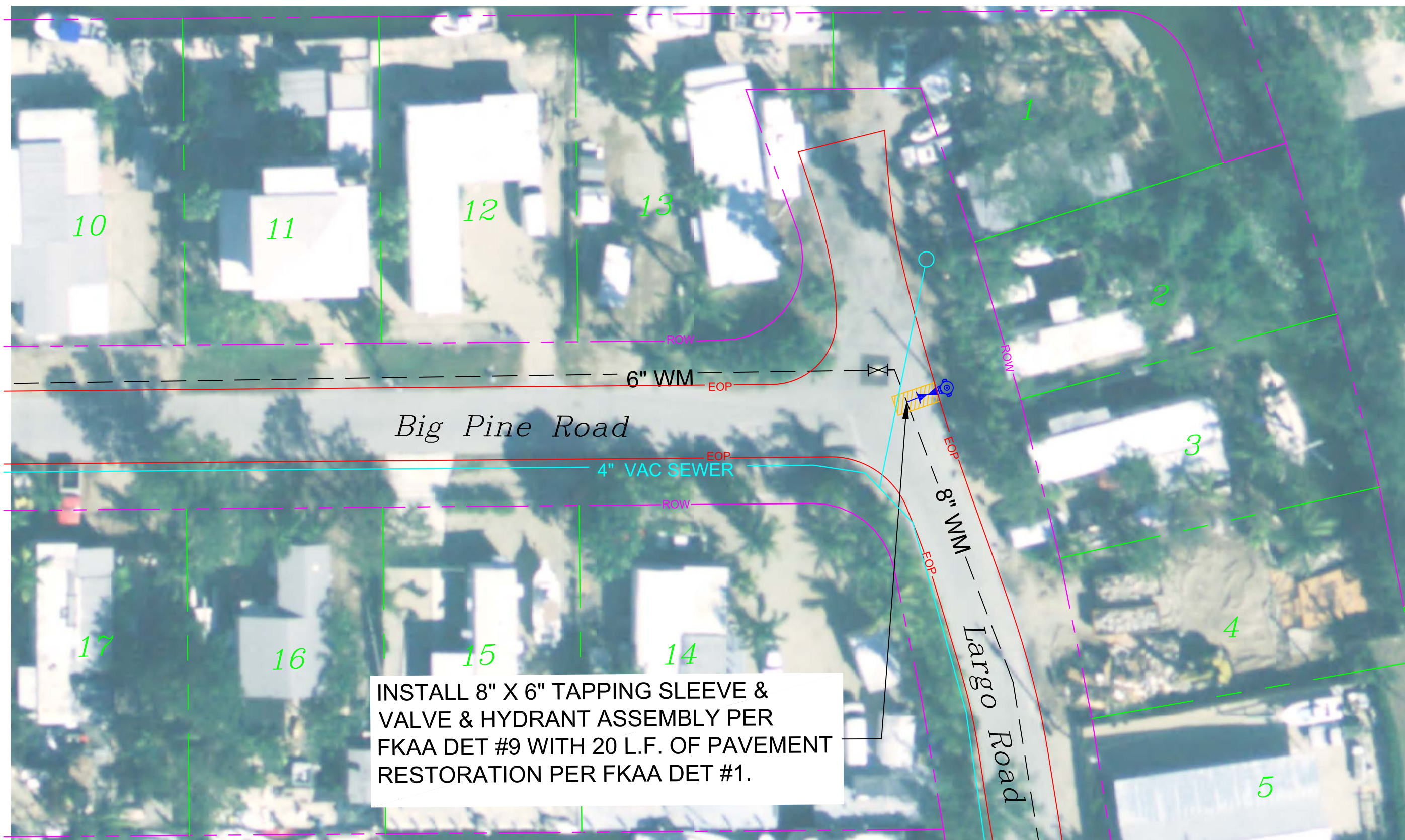
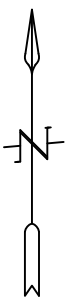


Key Largo Fire Hydrants
Phase 5
Key Largo, Florida

TITLE:

Date:
5/25/2016

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Cover



INSTALL 8" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 20 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.

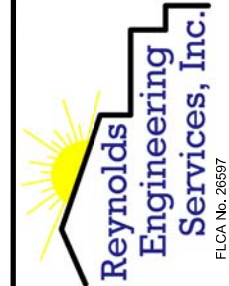


NOTE:
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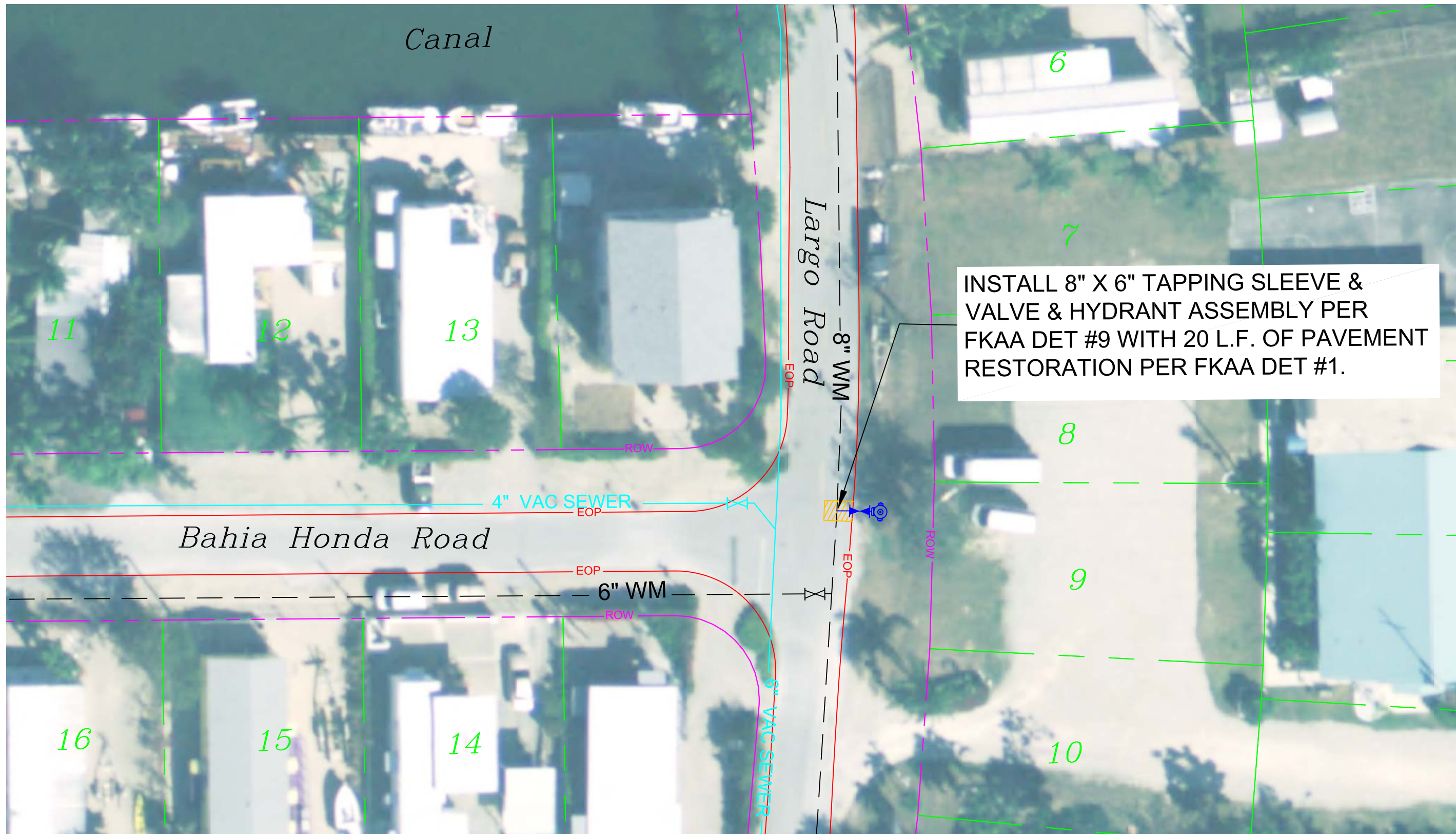
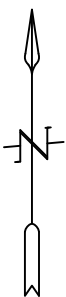
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TITLE: Lake Surprise-Fire Hydrant-#16-02
Largo Road & Big Pine Road
Key Largo, Florida

Date:
5/25/2016

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INSTALL 8" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FKAA DET #9 WITH 20 L.F. OF PAVEMENT RESTORATION PER FKAA DET #1.

Scale: 1:30

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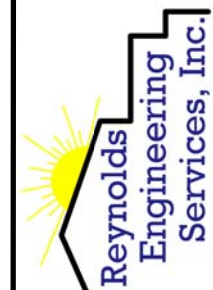
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NOTE:
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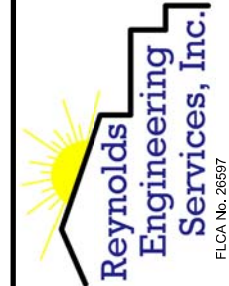
TITLE: Lake Surprise-Fire Hydrant-#16-03
Largo Road & Bahia Honda Road
Key Largo, Florida

Date:
5/25/2016

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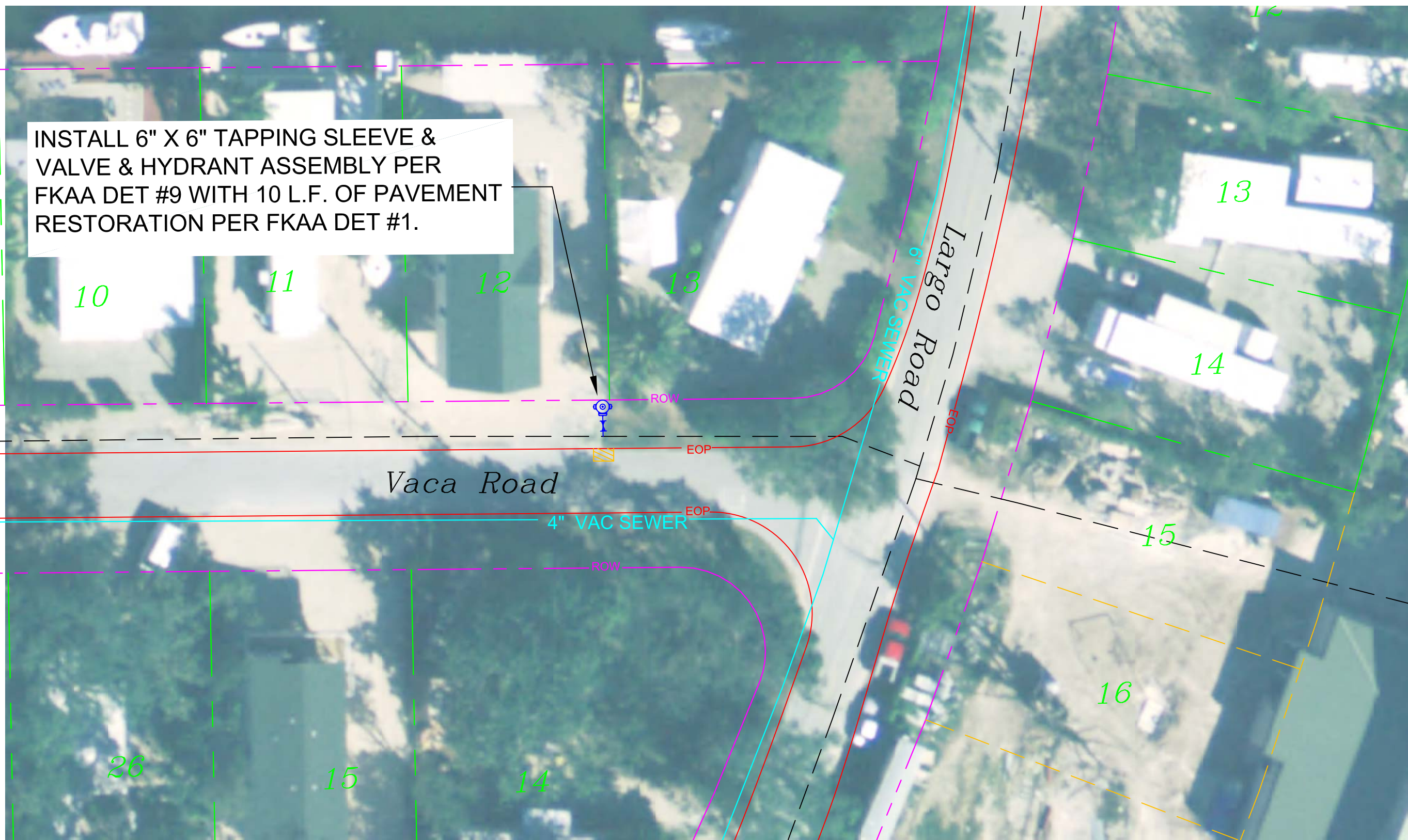
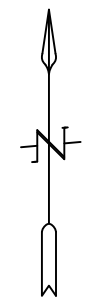
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TITLE: Lake Surprise-Fire Hydrant-#16-04
 Largo Road & Vaca Road
 Key Largo, Florida

Date: 5/25/2016

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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.

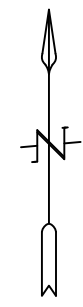
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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 20 L.F. PAVEMENT RESTORATION PER FCAA DET #1.



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TITLE:
 Rock Harbor Estates-Fire Hydrant-#16-05
 Cactus Street & Thomas Avenue
 Key Largo, Florida

Scale: 1:30



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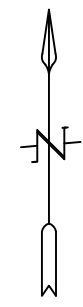
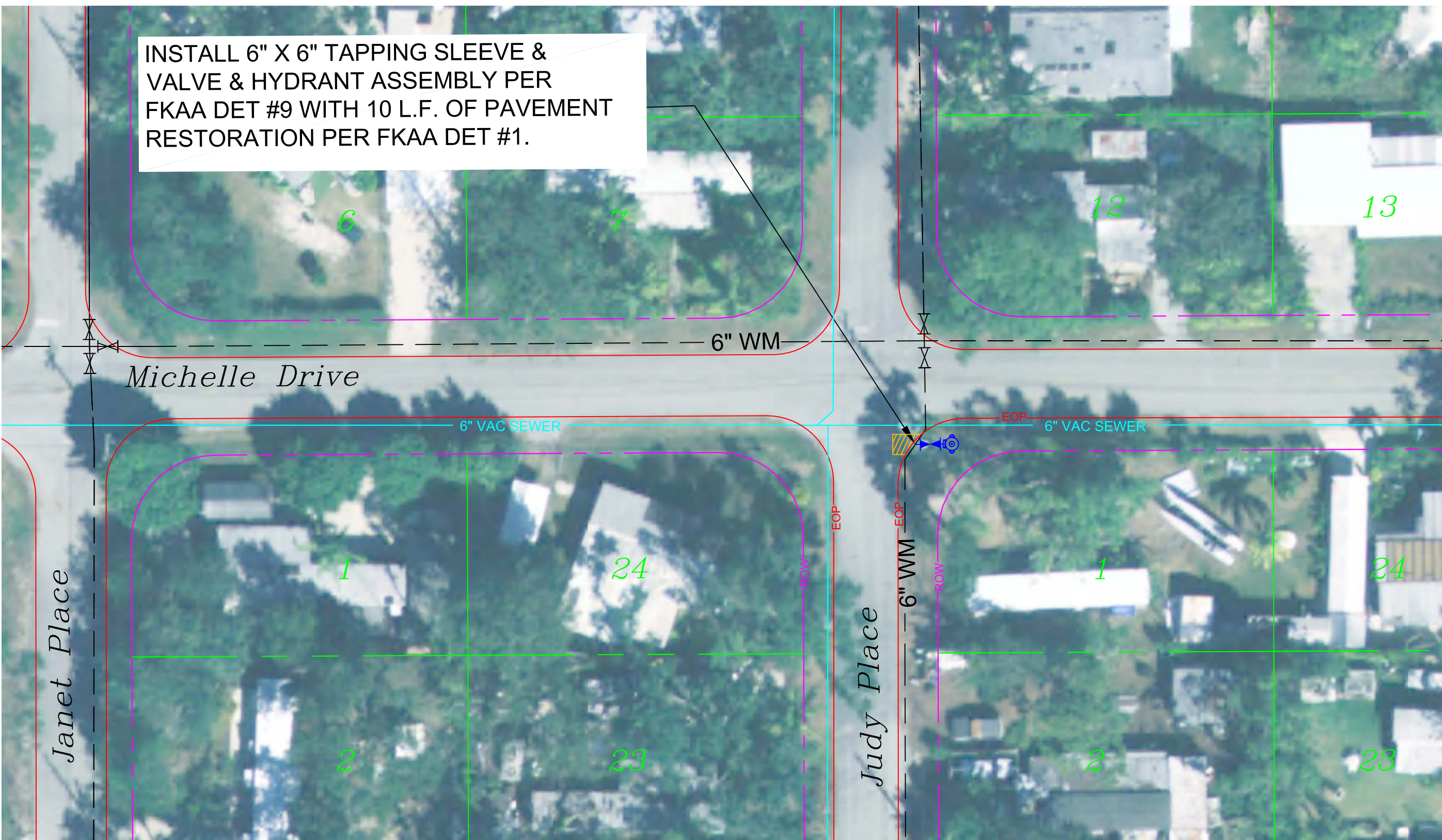
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NOTE:
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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.



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TITLE: Largo Gardens-Fire Hydrant-#16-06
 Michele Drive & Judy Place
 Key Largo, Florida

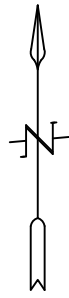
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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9. KEEP OUT OF FDOT RIGHT-OF-WAY.



Scale: 1:30

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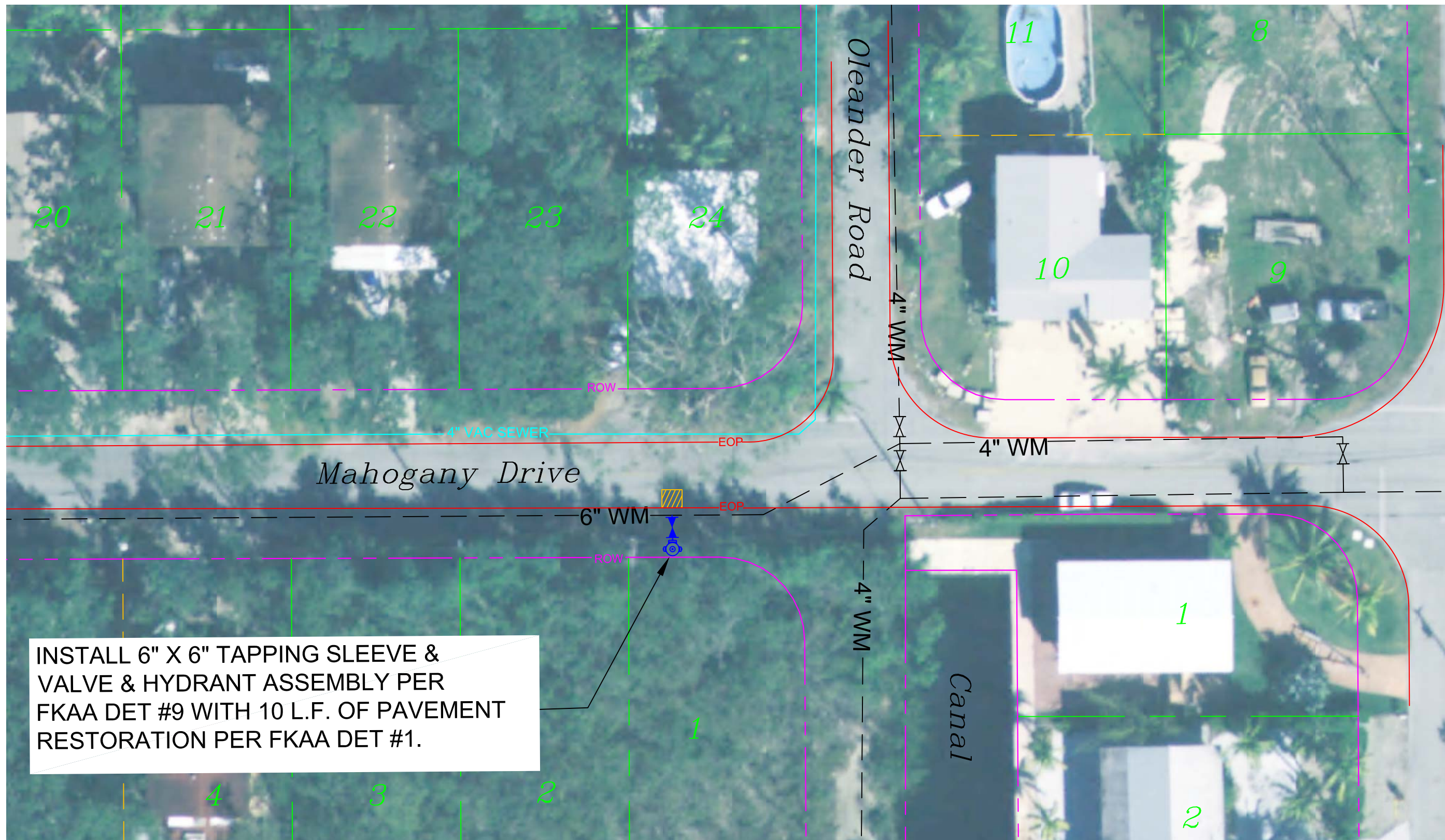
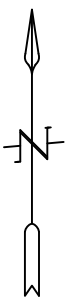


Fire Hydrant-#16-07
Lignumvitae Drive & US1
Key Largo, Florida

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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.



NOTE: ALL WORK MUST CONFORM TO FCAA MINIMUM DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS.

Scale: 1:30

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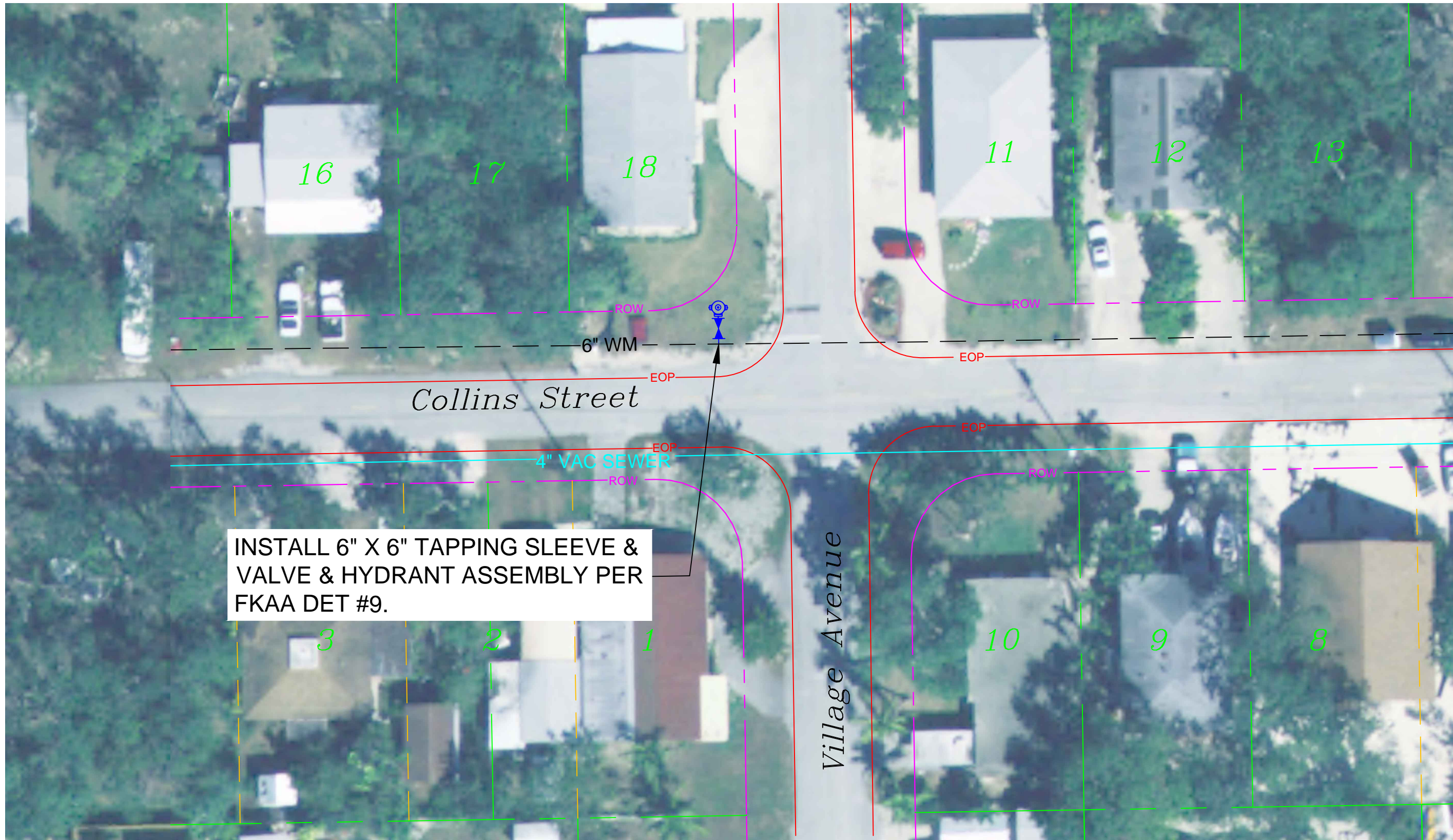
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 jim@reynoldsengeering.com



TITLE: Largo Gardens-Fire Hydrant-#16-08
 Mahogany Drive & Oleander Road
 Key Largo, Florida

Date: 5/25/2016

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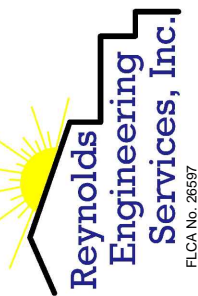
INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9.



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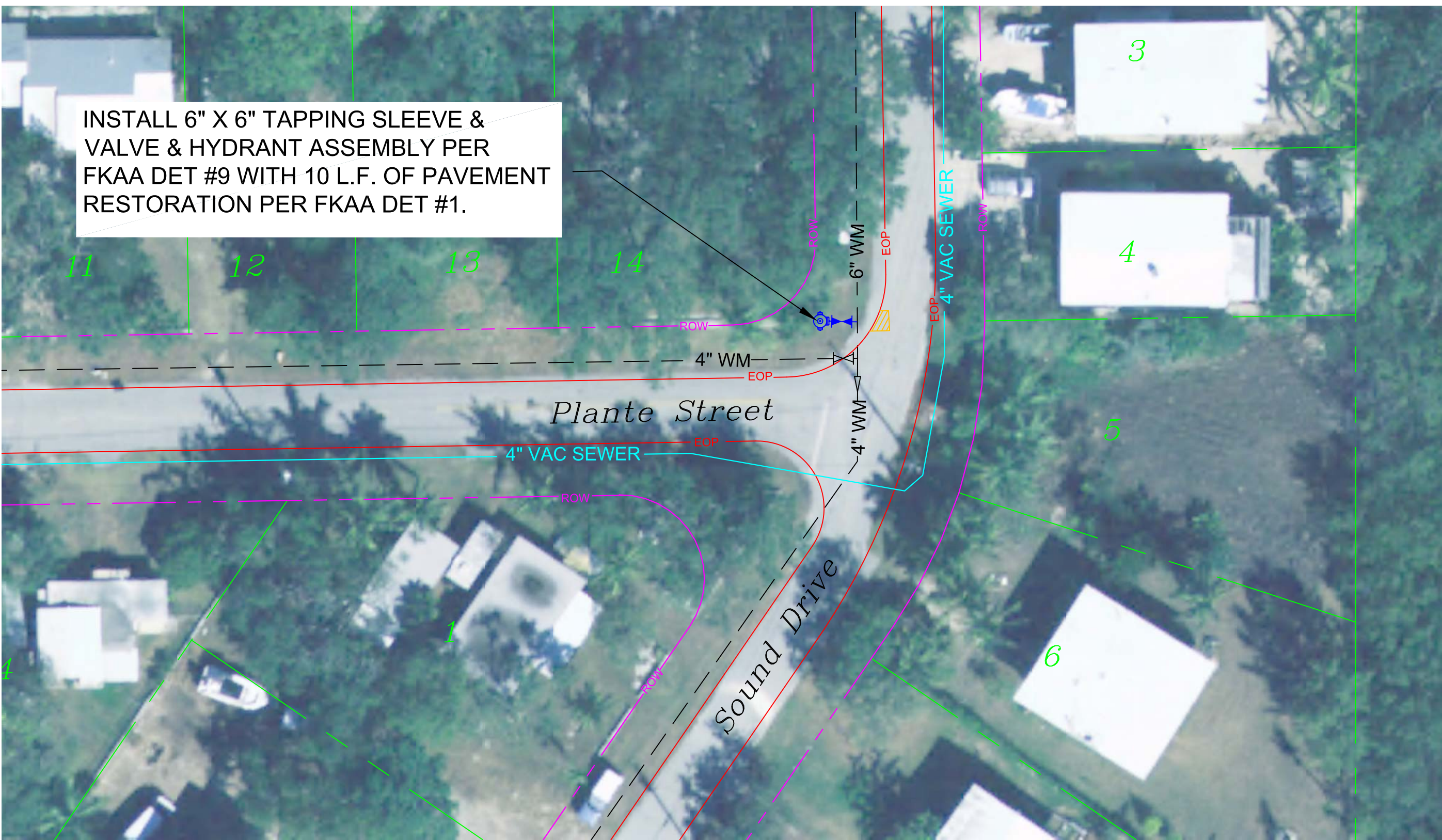
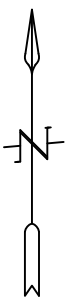


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TITLE:
 Date: 5/25/2016
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NOTE:
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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.



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Scale: 1:30

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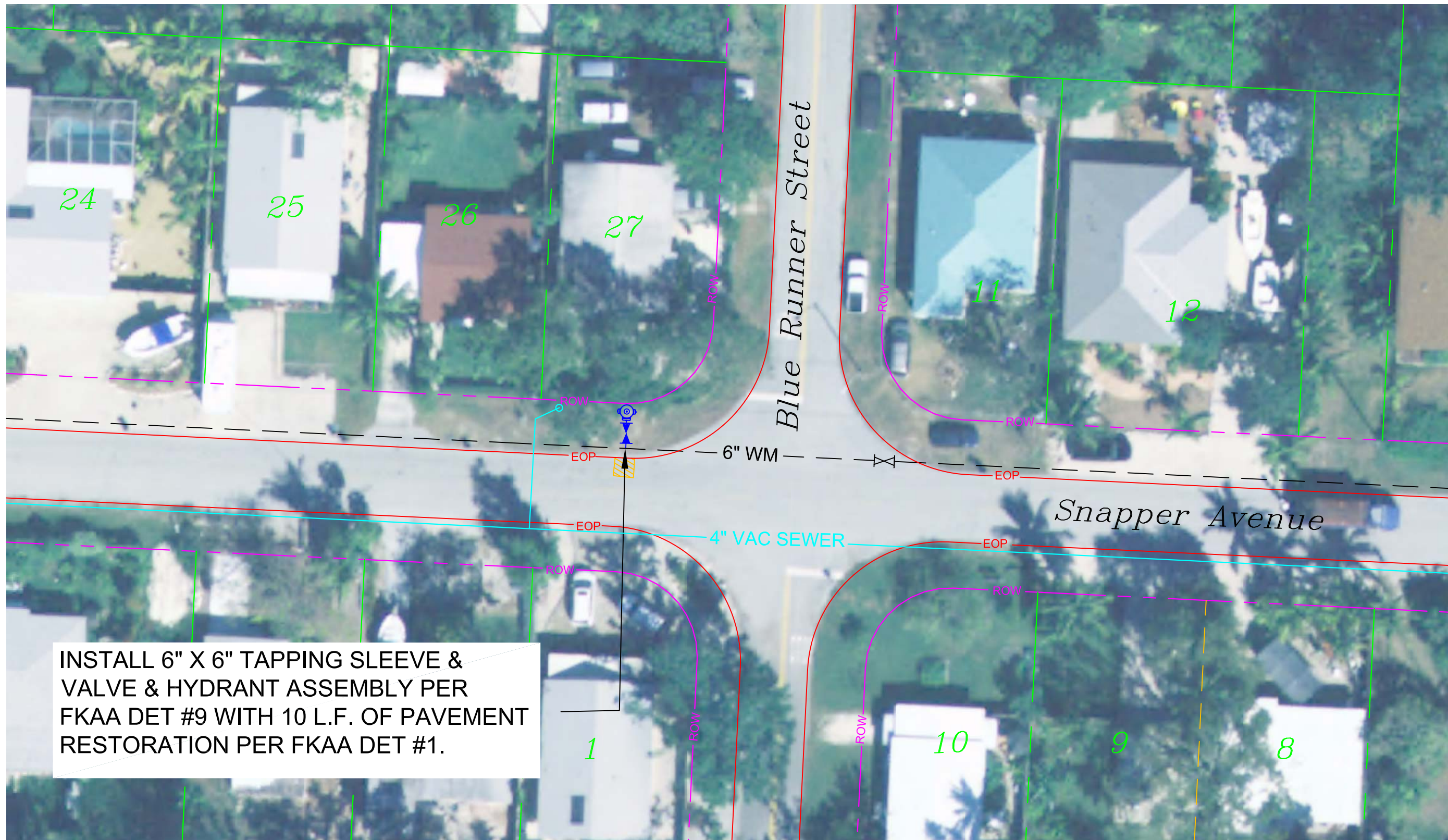
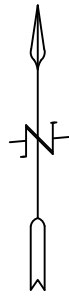


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TITLE: South Creek Village-Fire Hydrant-#16-10
Sound Drive & Plante Street
Key Largo, Florida

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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.



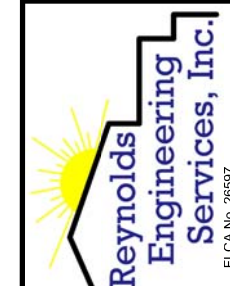
NOTE: ALL WORK MUST CONFORM TO FCAA MINIMUM DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS.

Scale: 1:30

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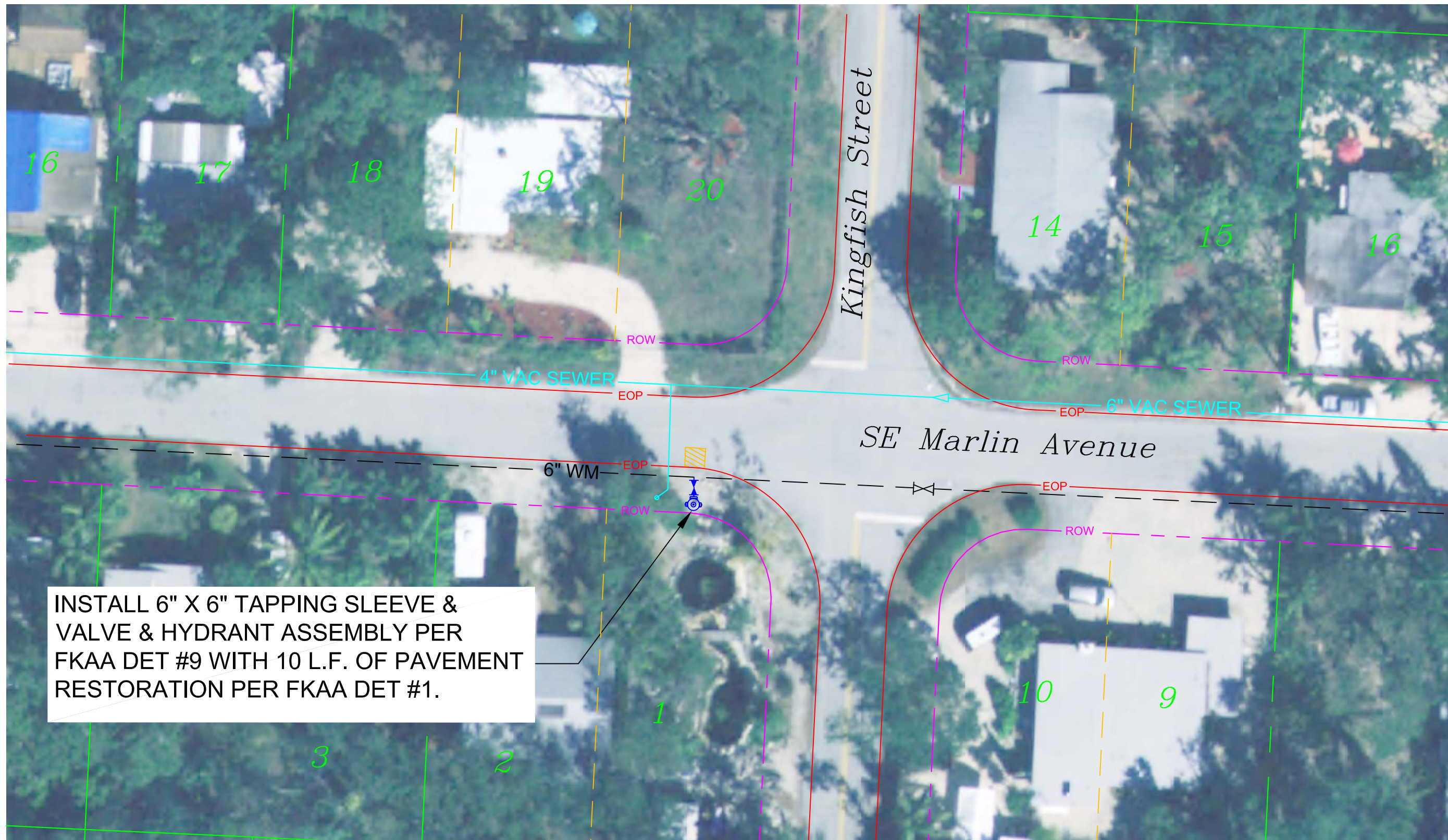
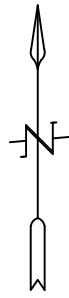
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TITLE: Largo Sound Park-Fire Hydrant-#16-11
Blue Runner Street & Snapper Avenue
Key Largo, Florida

Date: 5/25/2016

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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.



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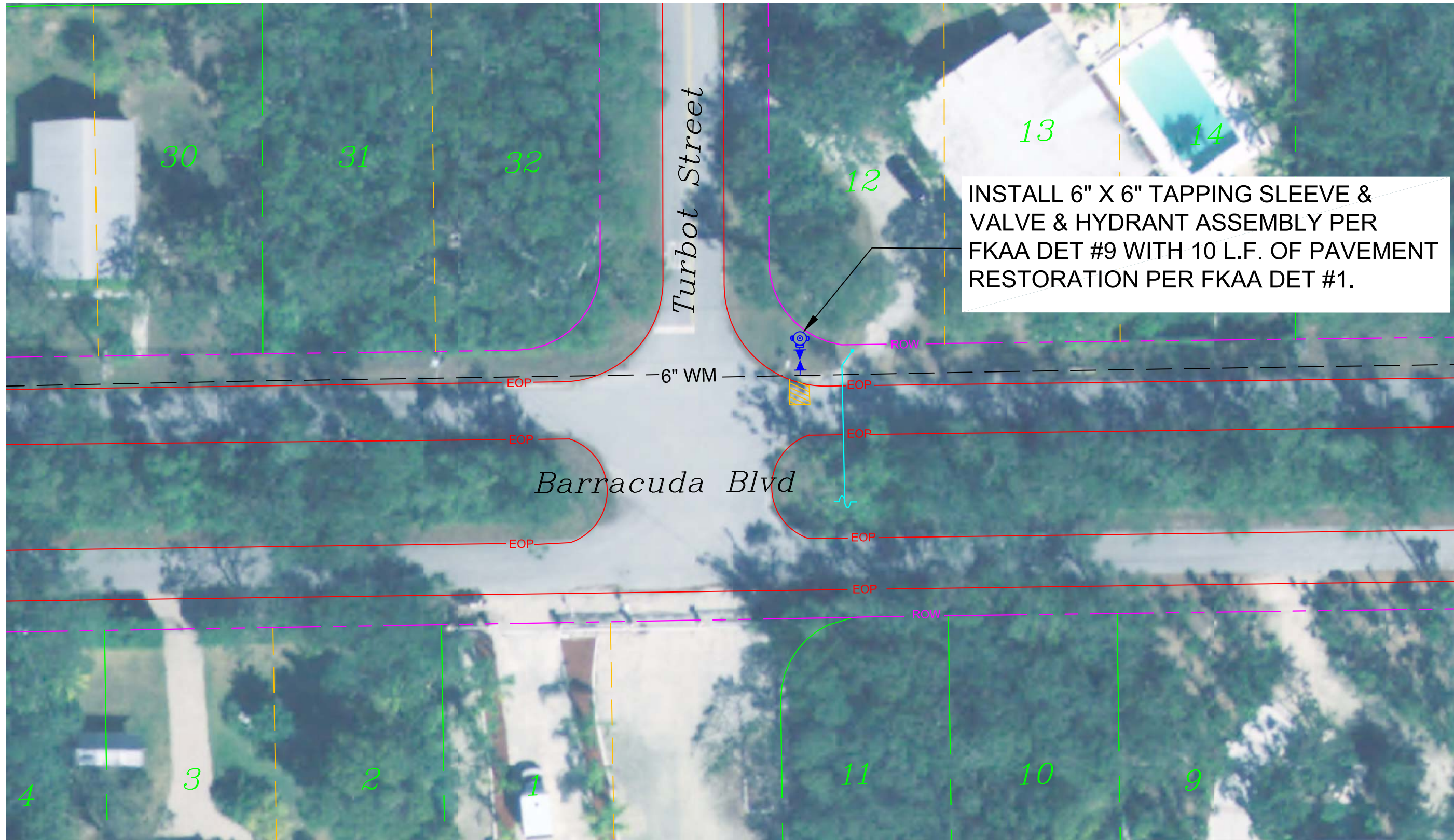
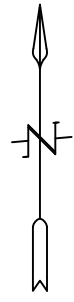
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TITLE: Largo Sound Park-Fire Hydrant-#16-12
SE Marlin Avenue & Kingfish Street
Key Largo, Florida

Date:
5/25/2016

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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.



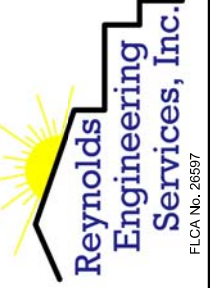
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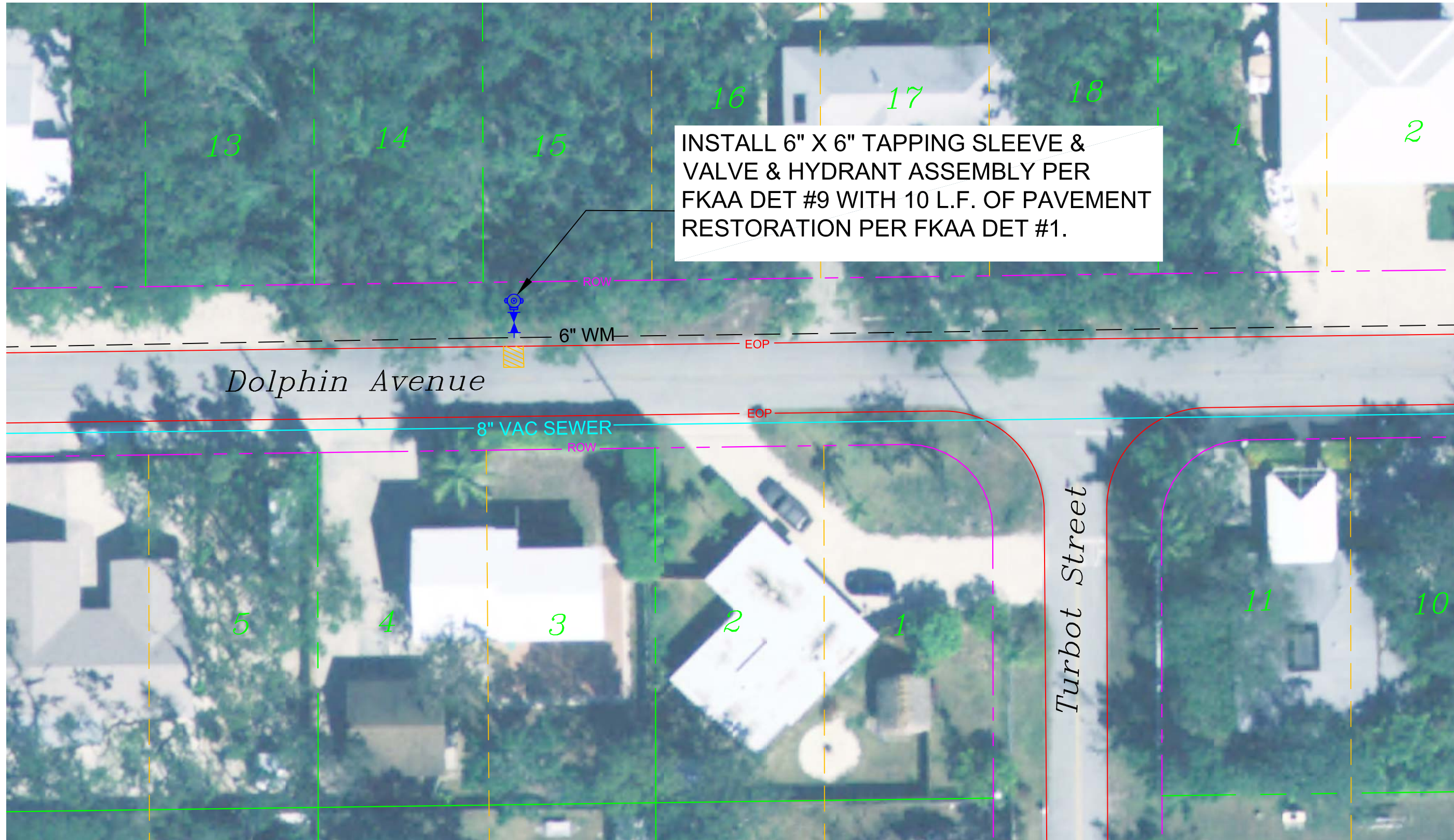
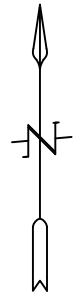
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TITLE: Anglers Park-Fire Hydrant-#16-13
 Barracuda Blvd.
 Key Largo, Florida

Date:
 5/25/2016

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INSTALL 6" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.



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Anglers Park-Fire Hydrant-#16-14
 672 Dolphin Avenue
 Key Largo, Florida

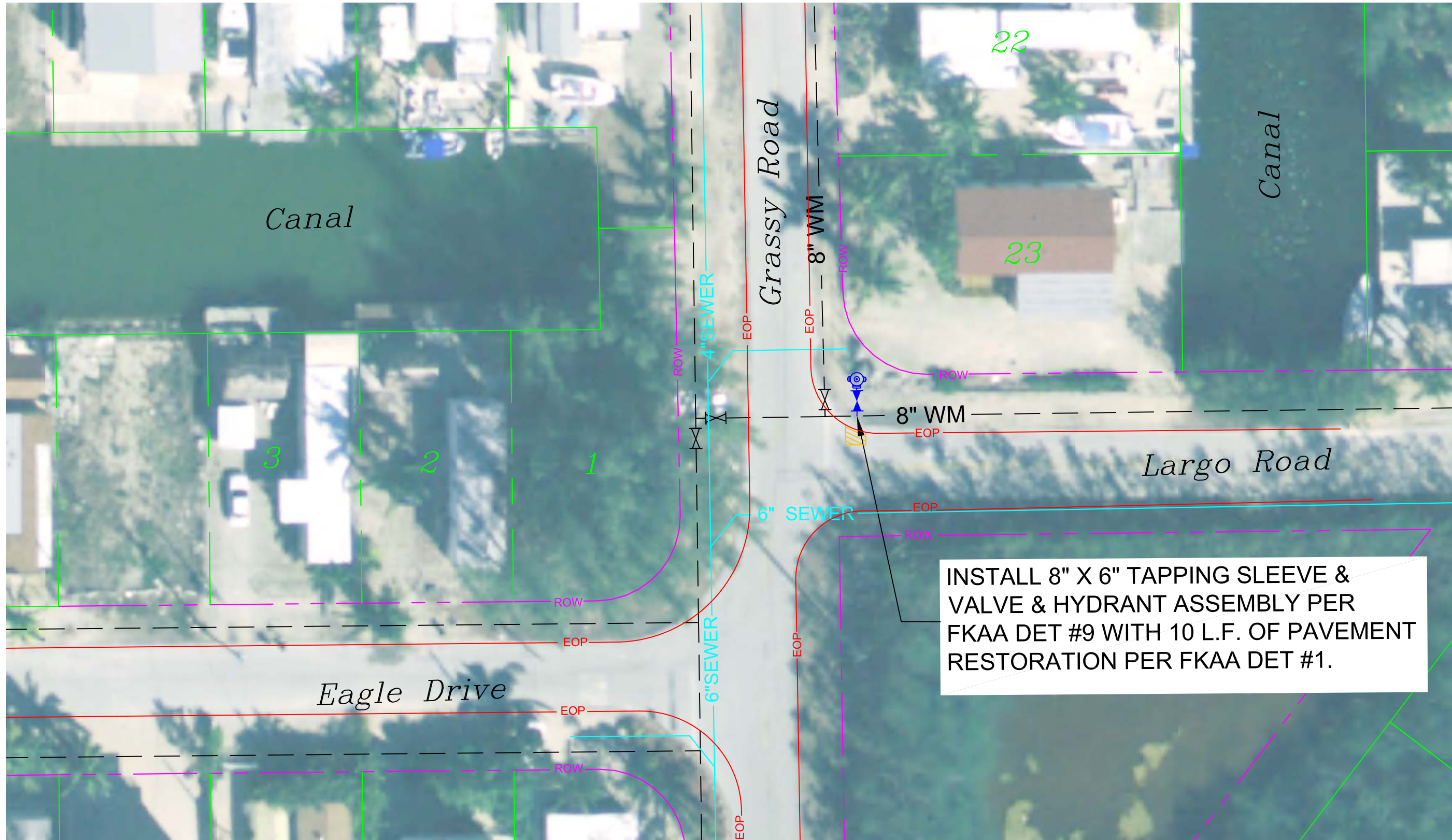
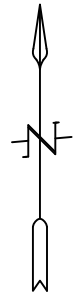
TITLE:
 Date: 5/25/2016
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INSTALL 8" X 6" TAPPING SLEEVE & VALVE & HYDRANT ASSEMBLY PER FCAA DET #9 WITH 10 L.F. OF PAVEMENT RESTORATION PER FCAA DET #1.

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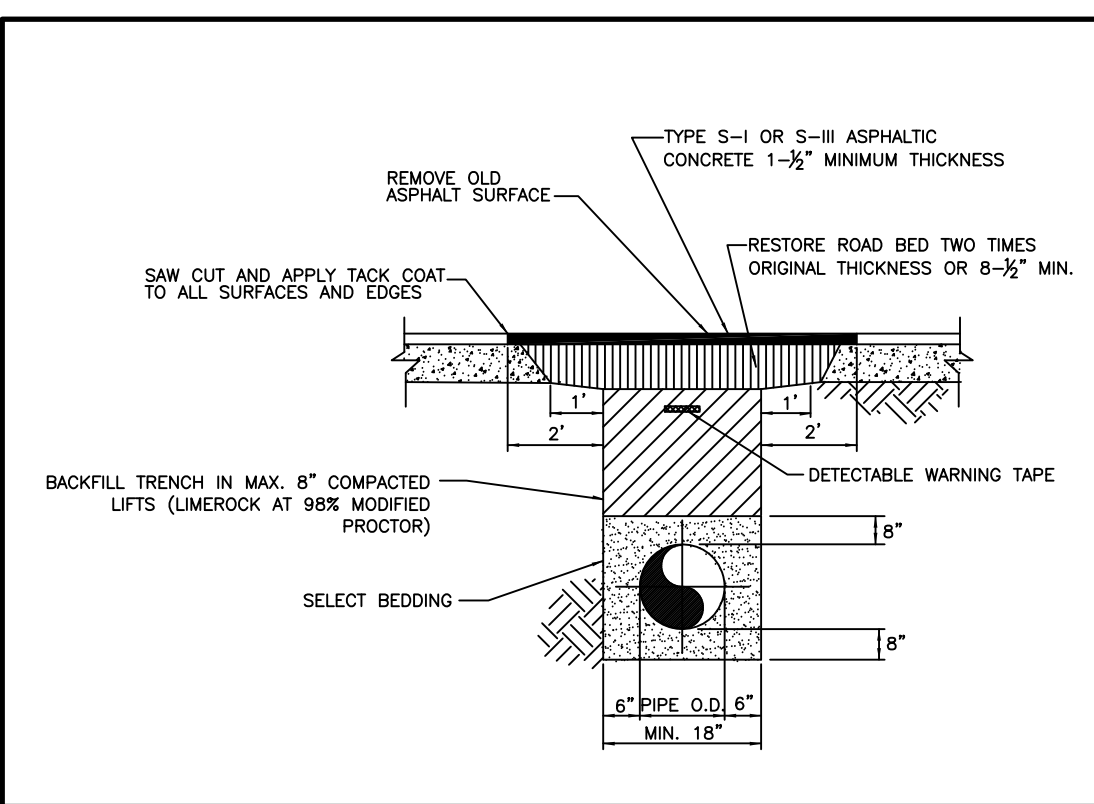
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TITLE: Lake Surprise-Fire Hydrant-#16-15
Largo Road & Grassy Road
Key Largo, Florida

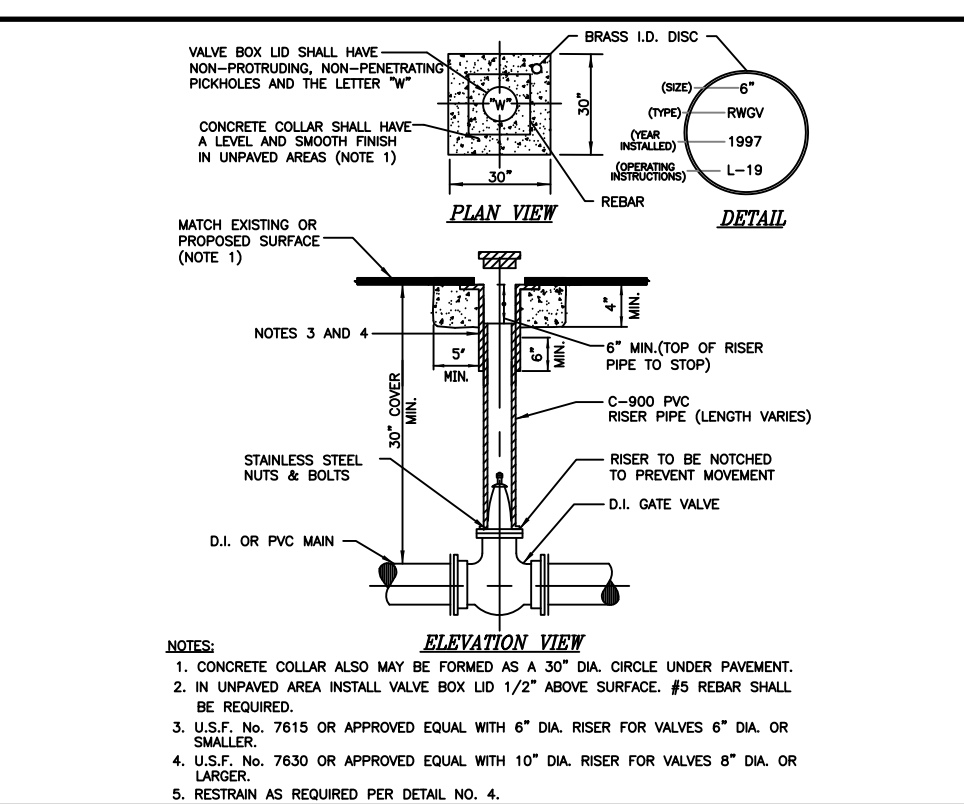
Date:
5/25/2016

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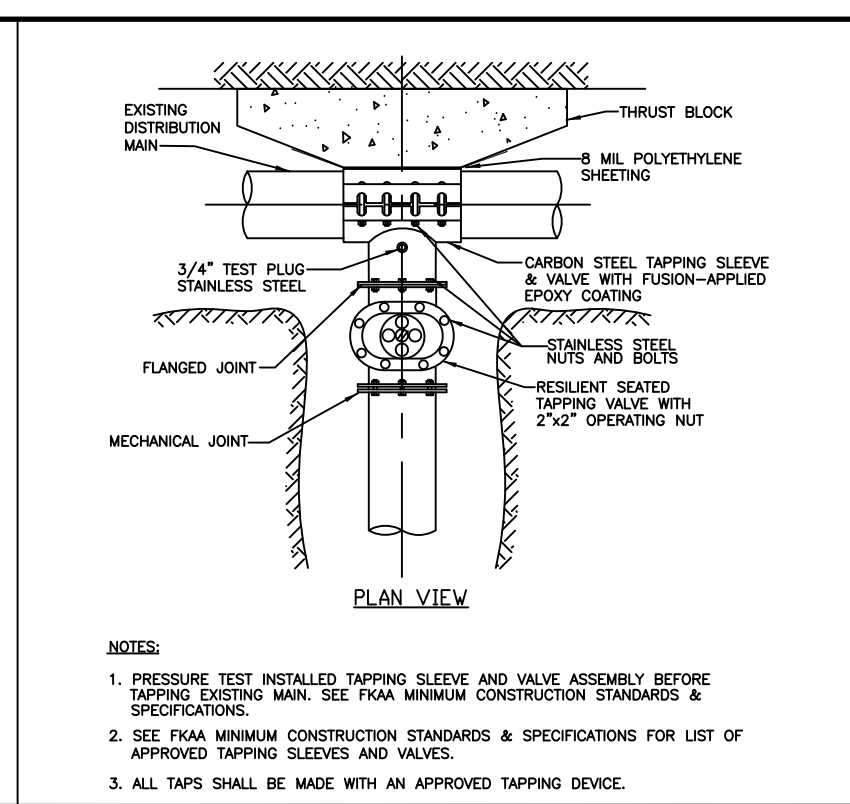
PAVEMENT RESTORATION WITH BACKFILL

STANDARD DETAIL DRAWING NO. 1a



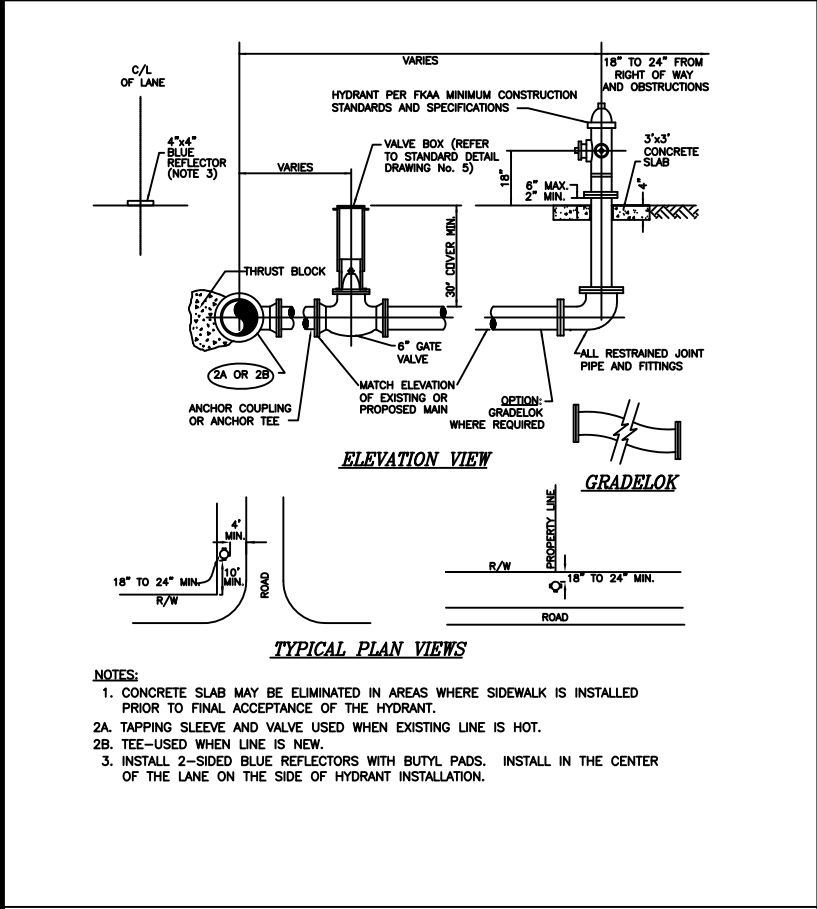
GATE VALVE & BOX

STANDARD DETAIL DRAWING NO. 5



TAPPING SLEEVE & VALVE FOR DISTRIBUTION

STANDARD DETAIL DRAWING NO. 7



FIRE HYDRANT ASSEMBLY

STANDARD DETAIL DRAWING NO. 9

PVC PIPE RESTRAINT JOINT SCHEDULE

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS			VALVES OR DEAD-ENDS L (FT.)	REDUCERS (SIZE) L (FT.)	TEES (NOTE 5)	
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS LR (FT.)	45° BENDS (SEE NOTE 4) LU (FT.)	LI (FT.)	LI (FT.)			RUN SIZE	BRANCH SIZE
4	20	8	4	2	20	3	50	6 X 4	35	4"	4" F.O.
6	28	10	5	2	28	4	70	8 X 6	35	6"	4" <LESS F.O.
8	36	14	6	3	36	5	90	8 X 4	65	8"	6" <LESS F.O.
10	40	18	8	4	45	6	110	10 X 8	35	10"	8" <LESS F.O.
12	50	20	9	4	52	8	120	10 X 6	65	10"	8" <LESS F.O.
14	56	23	10	5	60	9	140	12 X 10	35	12"	10" <LESS F.O.
16	60	26	11	6	67	10	160	12 X 8	65	12"	10" <LESS F.O.
18	69	29	12	6	74	12	180	16 X 12	65	16"	12" <LESS F.O.
20	75	32	13	7	80	13	195	16 X 10	95	16"	12" <LESS F.O.
24	76	33	15	7	81	14	200	20 X 18	35	20"	16" <LESS F.O.
30	88	36	18	9	97	16	235	20 X 16	65	20"	16" <LESS F.O.
36	100	40	20	10	110	20	270	24 X 20	65	24"	20" <LESS F.O.
42	115	48	23	11	125	24	300	24 X 18	95	24"	16" <LESS F.O.
48	125	52	25	12	140	30	340	24 X 16	120	24"	16" <LESS F.O.
								30 X 24	80	30"	24" <LESS F.O.
								30 X 20	150	30"	20" <LESS F.O.
								36 X 30	80	36"	30" <LESS F.O.
								36 X 24	150	36"	24" <LESS F.O.
								42 X 36	80	42"	36" <LESS F.O.
								42 X 30	150	42"	30" <LESS F.O.
								48 X 42	80	48"	42" <LESS F.O.
								48 X 36	150	48"	36" <LESS F.O.

PVC PIPE RESTRAINT NOTES

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM.
- ASSUMPTIONS: PVC PIPE, SAFETY FACTOR = 1.5, TEST PRESSURE = 150 PSI, SOIL = GM OR SM, TRENCH TYPE 3, DEPTH OF COVER = 36".
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, LU IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. LI IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN) SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
- HDPE TO PVC TRANSITIONS: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FEET (MIN.).

F.O. = FITTING ONLY

PVC PIPE RESTRAINT JOINT SCHEDULE

STANDARD DETAIL DRAWING NO. 4 (1 OF 2)

LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main 3 ft. minimum	Water Main 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum Water Main
Vacuum Sanitary Sewer	Water Main 10 ft. preferred 3 ft. minimum	Water Main 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main 10 ft. preferred 6 ft. minimum (3)	Water Main 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum	---	---

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
 (2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
 (3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
 (4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Disclaimer - This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.

FIRE HYDRANT ASSEMBLY

STANDARD DETAIL DRAWING NO. 9

PVC PIPE RESTRAINT JOINT SCHEDULE

STANDARD DETAIL DRAWING NO. 4 (1 OF 2)

NOTE: ALL WORK MUST CONFORM TO FCAA MINIMUM DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS.

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Key Largo Fire Hydrants
Phase 5
Key Largo, Florida

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Details