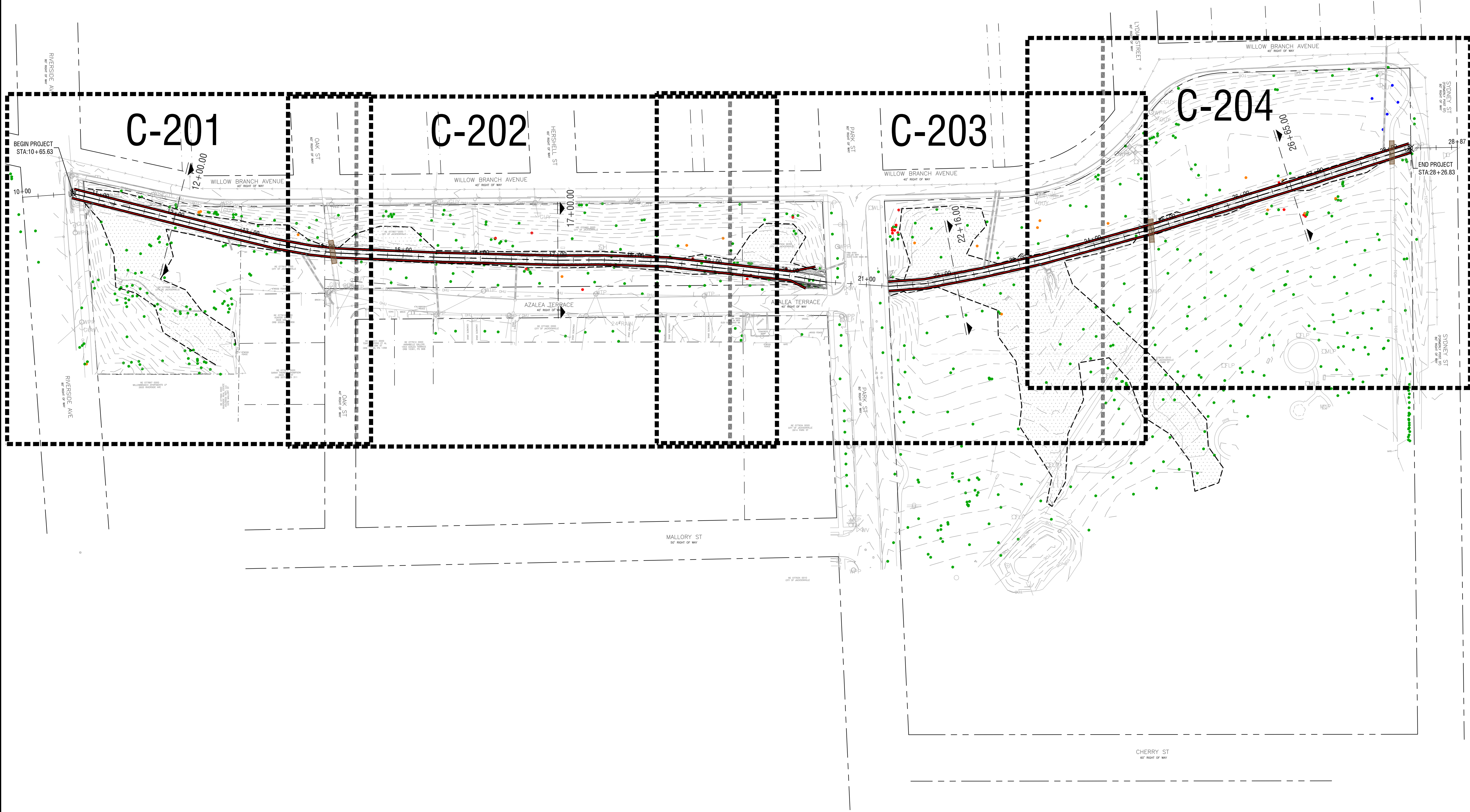




| APPROXIMATE TIDAL DATUMS      |                    |
|-------------------------------|--------------------|
| DATUM                         | ELEVATION (NAVD88) |
| MEAN HIGHER-HIGH WATER (MHHW) | 0.59               |
| MEAN HIGH WATER (MHW)         | 0.54               |
| MEAN SEA LEVEL (MSL)          | -0.21              |
| MEAN LOW WATER (MLW)          | -1.05              |
| MEAN LOWER-LOW WATER (MLLW)   | -1.15              |

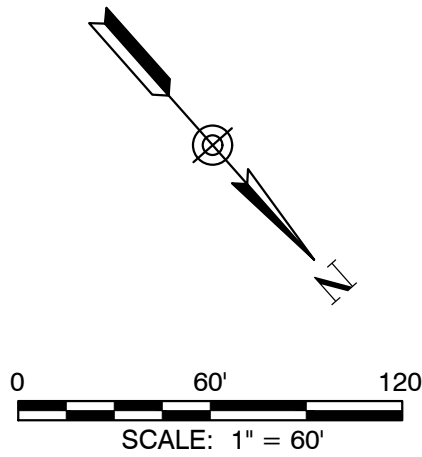
SOURCE: NOAA (VALUES ARE INTERPOLATED BETWEEN THE MAIN STREET BRIDGE AND BUCKMAN BRIDGE TIDE STATIONS)

| STORM SURGE ELEVATIONS |                    |
|------------------------|--------------------|
| ANNUAL CHANCE EVENT    | ELEVATION (NAVD88) |
| 10%                    | 2.4                |
| 4%                     | 2.6                |
| 2%                     | 3.2                |
| 1%                     | 4.0                |
| 0.20%                  | 5.9                |
| HURRICANE IRMA         | 5.5                |

SOURCE: FEMA FLOOD INSURANCE STUDY

| TREES REMOVED |                |               |
|---------------|----------------|---------------|
| SPECIES       | INCHES REMOVED | COUNT REMOVED |
| PROTECTED     |                |               |
| COTTONWOOD    | 9              | 1             |
| HICKORY       | 0              | 0             |
| LIGUSTRUM     | 0              | 0             |
| MAGNOLIA      | 0              | 0             |
| MO            | 96             | 4             |
| MYRTLE        | 0              | 0             |
| OAK           | 10             | 2             |
| WATER OAK     | 0              | 0             |
| PALM          | 154            | 9             |
| PECAN         | 0              | 0             |
| SWEETGUM      | 0              | 0             |
| WILLOW        | 0              | 0             |
| TOTAL         | 269            | 16            |
| NOT PROTECTED |                |               |
| CAMPBOR       | 24             | 1             |
| MULBERRY      | 76             | 3             |
| TOTAL         | 100            | 4             |

| LEGEND |                                                                       |
|--------|-----------------------------------------------------------------------|
|        | PEDESTRIAN BRIDGE TO BE REPLACED                                      |
|        | PROPOSED ENVIROLOCK GEOBAG STABILIZED SLOPE                           |
|        | PROPOSED ENVIROLOCK GEOBAG AND/OR ROLANKA BIOD-BLOCK STABILIZED SLOPE |
|        | PROPOSED CHANNEL CENTERLINE                                           |
|        | EXISTING CONTOUR                                                      |
|        | PROPOSED CONTOUR                                                      |
|        | EXISTING TREE - PROTECTED                                             |
|        | EXISTING TREE - INVASIVE                                              |
|        | EXISTING TREE - DEAD/DISEASED/DYING                                   |
|        | EXISTING TREE - MEMORIAL                                              |
|        | EXISTING TREE - IMPACTED/REMOVED                                      |
|        | WETLAND LINE                                                          |
|        | RIGHT OF WAY LINE                                                     |
|        | EXISTING STORM PIPE                                                   |



PROJECT NAME

WILLOW BRANCH CANAL  
STABILIZATION

PREPARED FOR  
CITY OF JACKSONVILLE  
DEPARTMENT OF PUBLIC WORKS



9985 GATE PARKWAY N, SUITE 200  
JACKSONVILLE, FLORIDA USA 32246  
PHONE 904.730.9380 WWW.HALFF.COM  
FL CA 33380 FLC 26000645

REVISIONS  
NO. DATE DESCRIPTION

SEAL

MICHAEL A. COFFEY, PH.D., PE  
LEED AP LICENSE # 57412

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FOR CONSTRUCTION

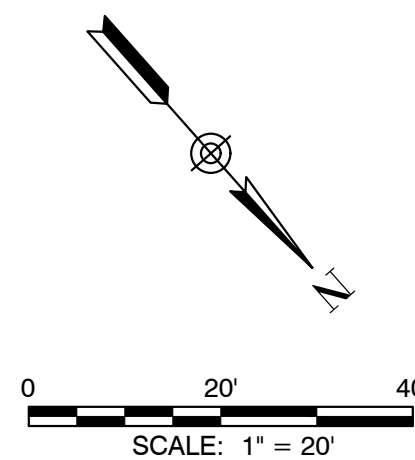
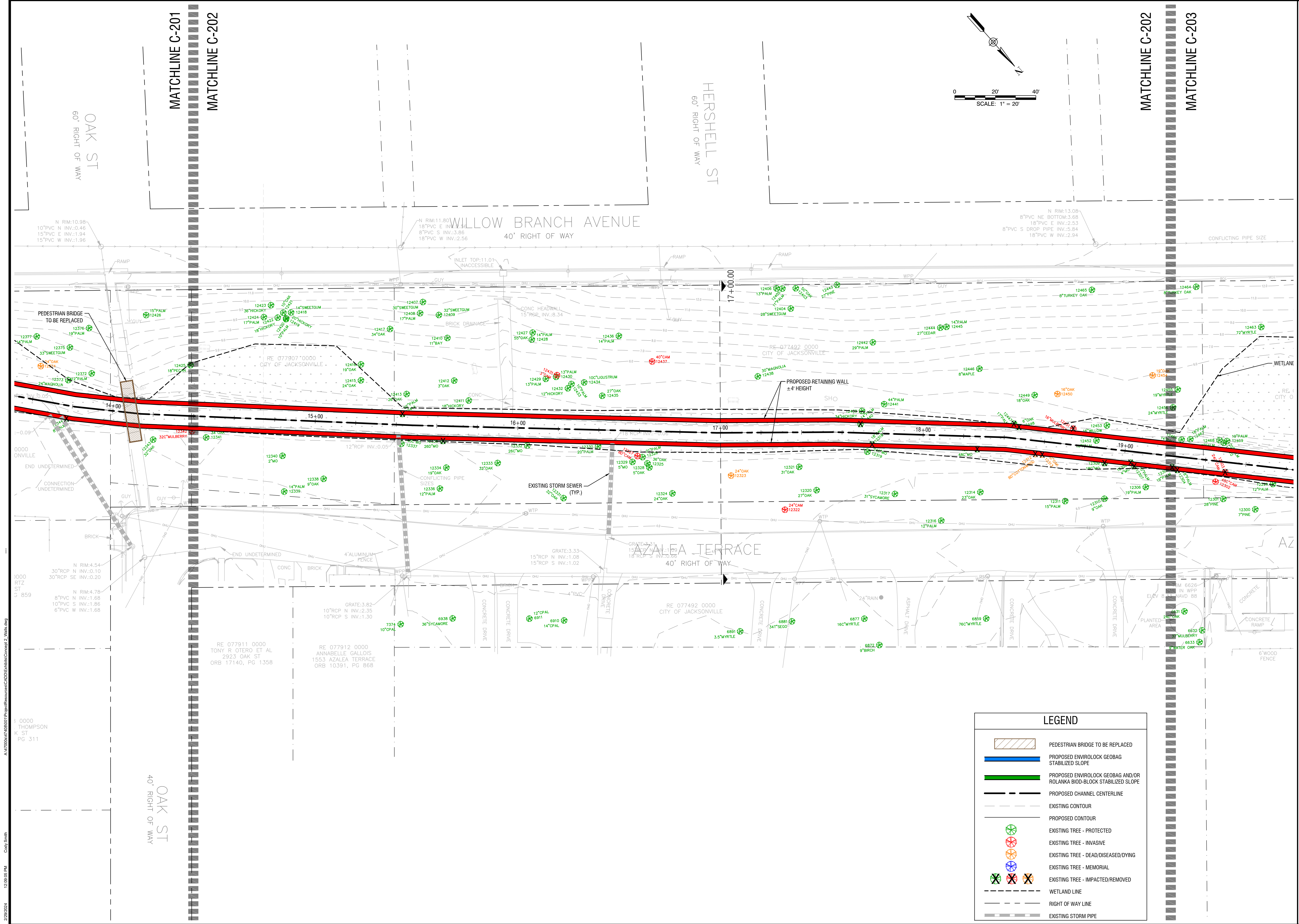
PROJECT NO.: 47408.001  
ISSUED: 2/29/2024  
DRAWN BY: NTD  
CHECKED BY: MAC  
SCALE: 1"= 20'

CONCEPT 2  
OVERALL  
GRADING PLAN

C-200



|                                                                                                                                                                                                                                                                                                                                                                                                                           |      |                                                                                 |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------|--|
| <h1 style="margin: 0;">WILLOW BRANCH CANAL<br/>STABILIZATION</h1>                                                                                                                                                                                                                                                                                                                                                         |      | <h1 style="margin: 0;">CITY OF JACKSONVILLE<br/>DEPARTMENT OF PUBLIC WORKS</h1> |  |
| PROJECT NAME                                                                                                                                                                                                                                                                                                                                                                                                              |      | PREPARED FOR                                                                    |  |
| <div style="display: flex; justify-content: space-around; align-items: center;"><div style="text-align: center;"><br/><b>halff</b></div><div style="text-align: left;"><p>9995 GATE PARKWAY N, SUITE 200<br/>JACKSONVILLE, FLORIDA USA 32246<br/>PHONE 904 730.9360    WWW.HALFF.COM<br/>FL CA 33380    FL LC 26000645</p></div></div> |      |                                                                                 |  |
| REVISIONS                                                                                                                                                                                                                                                                                                                                                                                                                 |      |                                                                                 |  |
| NO.                                                                                                                                                                                                                                                                                                                                                                                                                       | DATE | DESCRIPTION                                                                     |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                           |      |                                                                                 |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                           |      |                                                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                           |      |                                                                                 |  |
| SEAL                                                                                                                                                                                                                                                                                                                                                                                                                      |      |                                                                                 |  |
| MICHAEL A. COFFEY, PH.D., PE,<br>LEED AP LICENSE # 57412                                                                                                                                                                                                                                                                                                                                                                  |      |                                                                                 |  |
| PRELIMINARY - NOT<br>FOR CONSTRUCTION                                                                                                                                                                                                                                                                                                                                                                                     |      |                                                                                 |  |
| PROJECT NO.:                                                                                                                                                                                                                                                                                                                                                                                                              |      | 47408.001                                                                       |  |
| ISSUED:                                                                                                                                                                                                                                                                                                                                                                                                                   |      | 2/29/2024                                                                       |  |
| DRAWN BY:                                                                                                                                                                                                                                                                                                                                                                                                                 |      | NTD                                                                             |  |
| CHECKED BY:                                                                                                                                                                                                                                                                                                                                                                                                               |      | MAC                                                                             |  |
| SCALE:                                                                                                                                                                                                                                                                                                                                                                                                                    |      | 1"= 20'                                                                         |  |
| CONCEPT 2<br>GRADING PLAN                                                                                                                                                                                                                                                                                                                                                                                                 |      |                                                                                 |  |
| C-201                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                                                                                 |  |



PROJECT NAME

WILLOW BRANCH CANAL STABILIZATION

PREPARED FOR

CITY OF JACKSONVILLE  
DEPARTMENT OF PUBLIC WORKS

9985 GATE PARKWAY N. SUITE 200  
JACKSONVILLE, FLORIDA USA 32246  
PHONE 904.730.9380 WWW.HALFF.COM  
FL CA 33380 FLC 26000645

| REVISIONS |      | DESCRIPTION |
|-----------|------|-------------|
| NO.       | DATE |             |
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|           |      |             |
|           |      |             |
|           |      |             |

SEAL

MICHAEL A. COFFEY, PH.D., PE  
LEED AP LICENSE # 57412

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.: 47408.001  
ISSUED: 2/29/2024  
DRAWN BY: NTD  
CHECKED BY: MAC  
SCALE: 1"= 20'

CONCEPT 2 GRADING PLAN

C-202

2/29/2024 12:05:05 PM Copy Smith A:\47408\174488001\ProjectResources\CADD\Exhibit\Concept 2\_Wells.dwg

|                                                          |           |
|----------------------------------------------------------|-----------|
| SEAL                                                     |           |
| MICHAEL A. COFFEY, PH.D., PE.<br>LEED AP LICENSE # 57412 |           |
| PRELIMINARY - NOT<br>FOR CONSTRUCTION                    |           |
| PROJECT NO.:                                             | 47408.001 |
| ISSUED:                                                  | 2/29/2024 |
| DRAWN BY:                                                | NTD       |
| CHECKED BY:                                              | MAC       |
| SCALE:                                                   | 1"= 20'   |
| CONCEPT 2<br>GRADING PLAN                                |           |
| C-203                                                    |           |

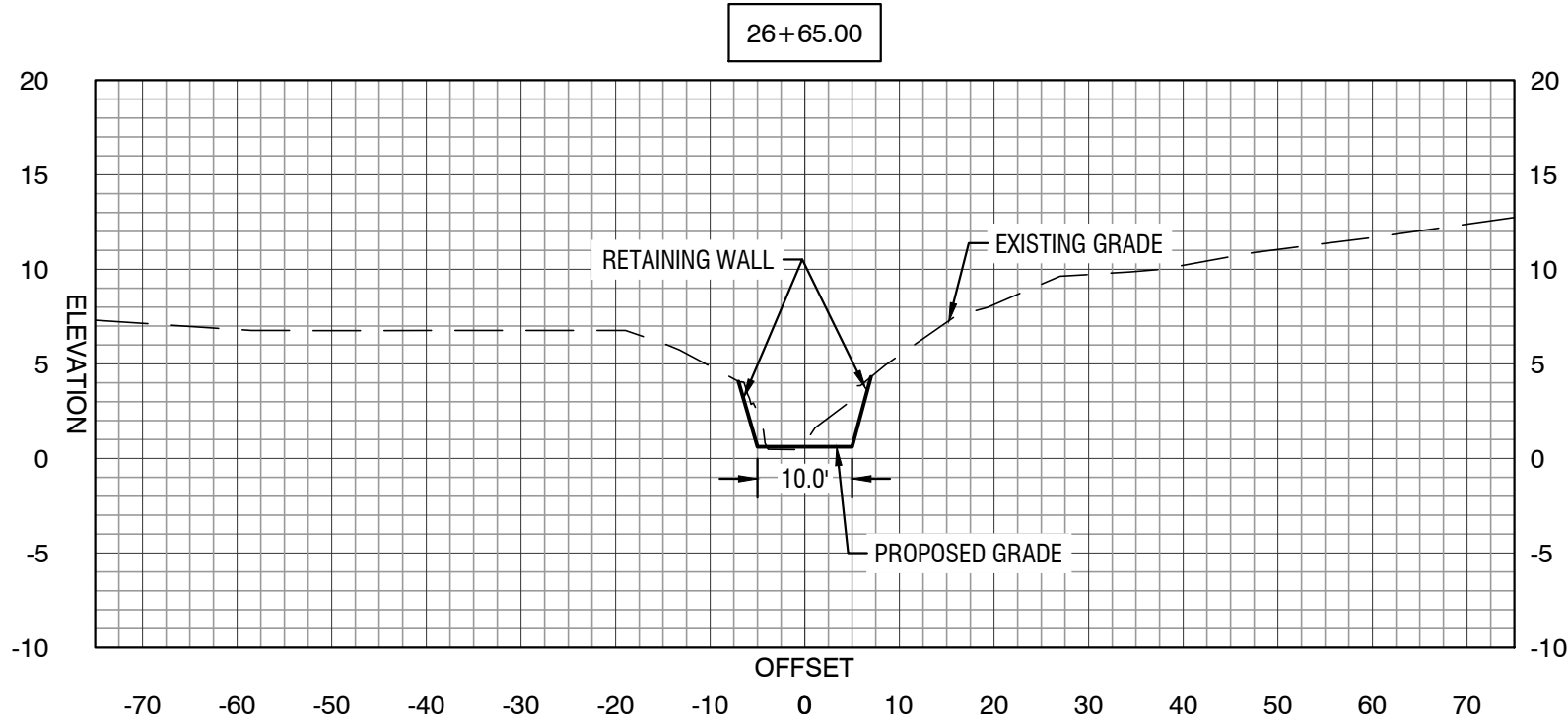
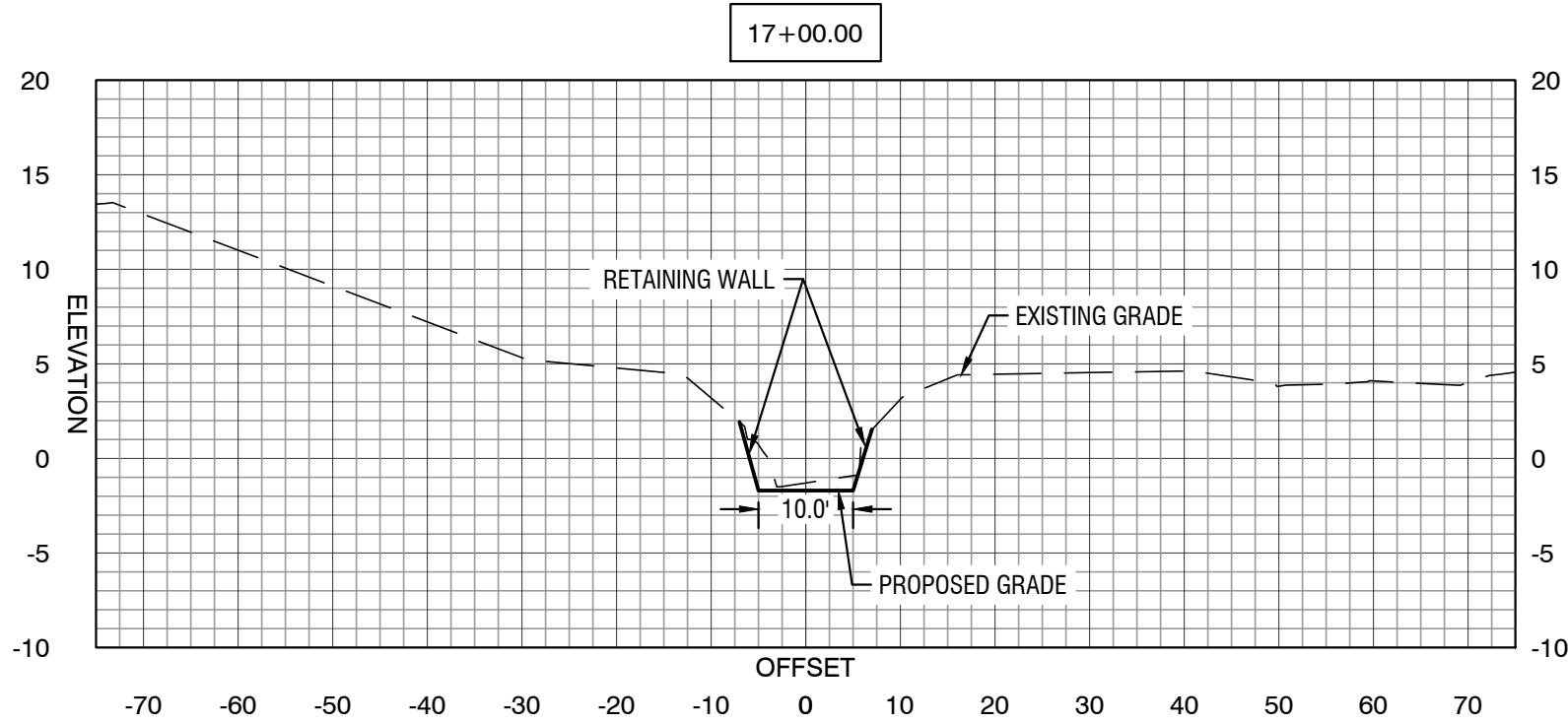
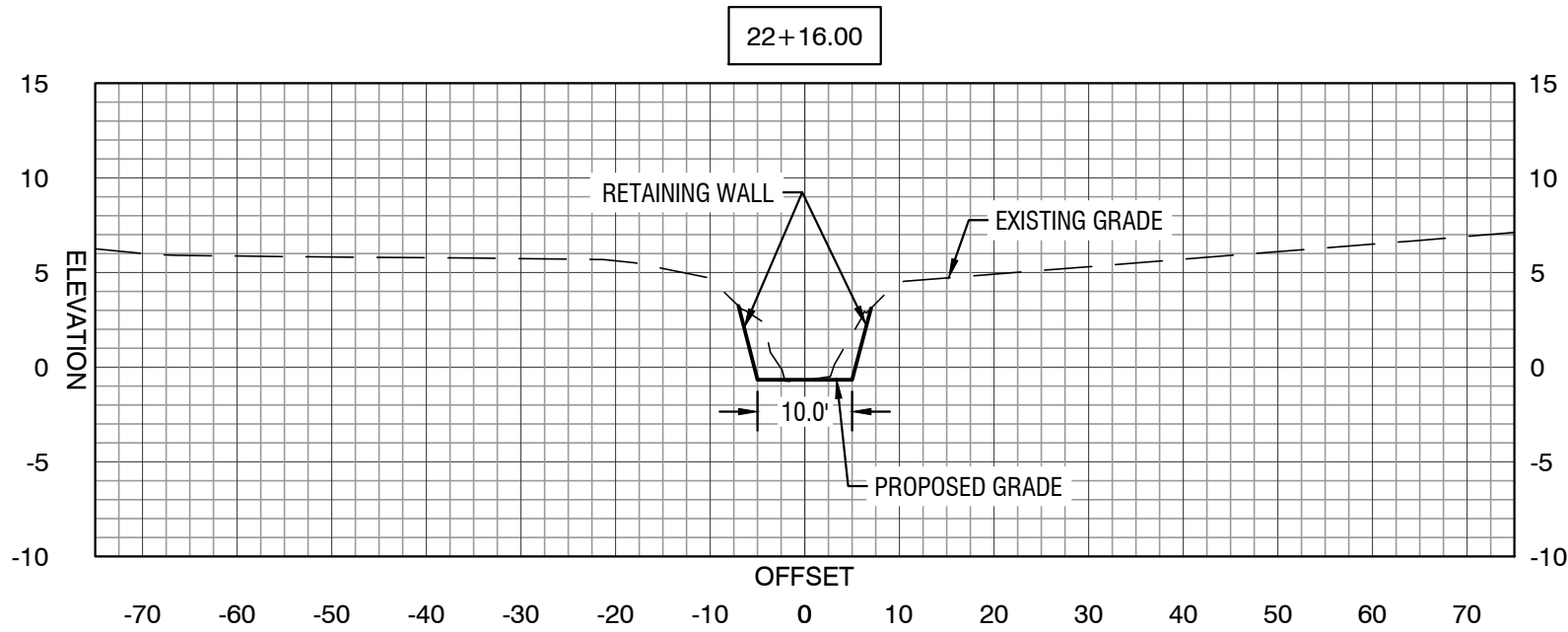
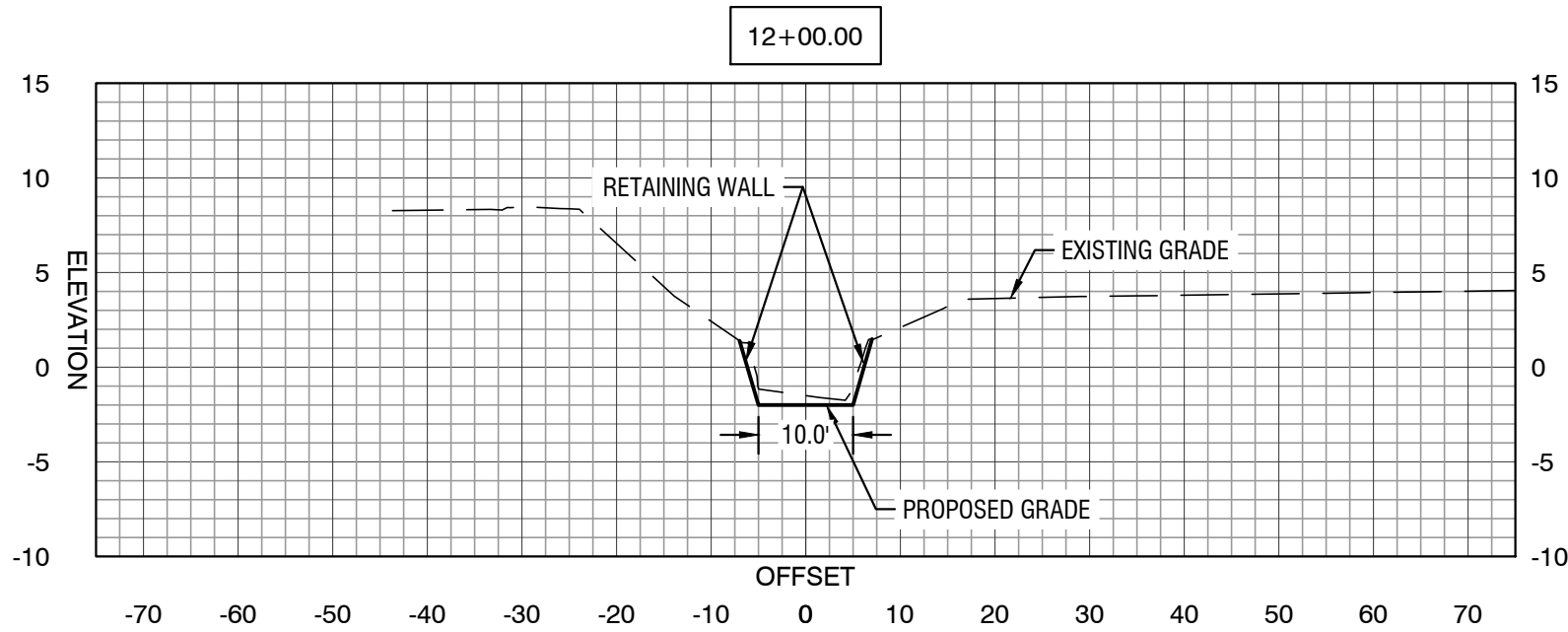
 **half**

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SEAL

MICHAEL A. COFFEY, PH.D., PE,  
LEED AP LICENSE # 57412

|                           |
|---------------------------|
| CONCEPT 2<br>GRADING PLAN |
| C-204                     |



SCALE  
HORIZONTAL: 1" = 20'  
VERTICAL: 1" = 10'

PROJECT NAME

WILLOW BRANCH CANAL  
STABILIZATION

PREPARED FOR  
CITY OF JACKSONVILLE  
DEPARTMENT OF PUBLIC WORKS



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PHONE 904.730.9360 WWW.HALFF.COM  
FL CA 33380 FLC 26000645

| REVISIONS<br>NO. | DATE | DESCRIPTION |
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SEAL

MICHAEL A. COFFEY, PH.D., PE.  
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SCALE: 1"= 20'

CONCEPT 2  
SECTIONS

C-205