

**CONTRACT DOCUMENTS**

**FOR**

**LANDSCAPE MAINTENANCE SERVICES**  
**ON SR 9 & DOWNTOWN GREENFIELD - 2023**

**Department of Engineering**  
**City of Greenfield**

**Chuck Fewell.....Mayor**  
**Jason Koch, PE.... City Engineer**

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**NOTICE TO QUOTERS**  
**City of Greenfield**

Department: **Department of Engineering**  
**10 S. State Street**  
**Greenfield, Indiana 46140**

Project/Work: **Landscape Maintenance Services: SR 9 Corridor & Downtown Greenfield - 2023**

Notice is hereby given that the City of Greenfield will receive sealed quotes for the above described "Project/Work" at Clerk-Treasurer's Office, 10 S. State Street, Greenfield, Indiana, until 9:30 a.m. prevailing local time, 10 S. State Street, on **February 23, 2023** and commencing as soon as practicable thereafter on the same date such quotes will be publicly opened. No late Quotes will be accepted.

The Work consists of, but is not necessarily limited to the following:

**Landscape maintenance services for landscaped medians located along SR 9 from McKenzie Rd to Progress Pkwy and landscaped beds scattered throughout downtown Greenfield for Calendar Year 2023.**

Contract Documents for the Project/Work have been assembled into one or more bound Project Manuals which, together with Drawings, may be examined at the Clerk-Treasurer's Office or the Department of Engineering at 10 S. State Street, Greenfield, Indiana 46140.

Electronic copies of the Drawings and Project Manuals will be available on the City of Greenfield website at <https://www.greenfieldin.org/government/engineering>. Quoters will be responsible to contact the Clerk-Treasurers office to be added to the plan-holders list if downloading electronic contract documents.

Quoters shall assure that they have obtained complete sets of drawings and Contract Documents and shall assume the risk of any errors or omissions in Quotes prepared in reliance on incomplete sets of drawings and Contract Documents.

No pre-quote conference for this Work will be held. Any questions or clarifications shall be sent to [jkoch@greenfieldin.org](mailto:jkoch@greenfieldin.org) no later than 4:00pm on February 10, 2023.

The City of Greenfield reserves the right to reject any or all quotes or to waive any informalities and to accept the quote which it deems most favorable to the interest of the City after all quotes have been examined and canvassed.

**INSTRUCTIONS TO QUOTERS**  
**City of Greenfield**

Department (“Owner”): **Department of Engineering  
10 S. State Street  
Greenfield, Indiana 46140**

Project/Work: **Landscape Maintenance Services: SR 9 Corridor & Downtown  
Greenfield - 2023**

Owner’s Representative: **Jason Koch**

Engineer: **N/A**

**1. GENERAL**

- 1.1 Submission of a Quote shall constitute an unconditional agreement and acknowledgment by the Quoter to be bound by all terms and conditions set forth herein and in any of the documents assembled or referred to in the bound Project Manual of which these Instructions to Quoters are a part.
- 1.2 Sample forms are included in the Project Manual to acquaint Quoters with the form and provisions of various Quote Documents and other documentation required by the Contract Documents to be executed, completed and submitted by some or all Quoters, either as part of a Quote Submission or after the Quote Date. Such sample forms are not to be detached from the Project Manual, or filled out or executed. Separate copies of such forms and any other required documentation prescribed by the Contract Documents have been or will be furnished separately by the Owner and must be obtained directly from the City.
- 1.3 Instructions and requirements printed on any sample form included in the Project Manual or any form not so included but required to be completed, signed or furnished by a Quoter as part of a Quote Submission or after receipt and opening of Quotes shall be deemed requirements established by these Instructions to Quoters to the same extent as if fully restated herein.
- 1.4 By submitting quote the Quoter agrees the quote proposal and price(s) contained herein shall be valid for ninety (90) days from quote opening.

**2. DEFINITIONS**

The following definitions shall apply to these Instructions to Quoters (ITQ):

- 2.1 Quoter - Any person or entity who submits a Quote.
- 2.2 Quote - A written proposal submitted by a Quoter as part of the form prescribed herein offering to perform and complete the Work and to fulfill all other requirements of the Contract Documents for one or more specified prices.
- 2.3 Quote Documents - All documents and completed forms required to be submitted by a Quoter with and as integral parts of a Quote Submission, whether or not included as sample forms

assembled in the Project Manual of which these Instructions to Quoters are a part. Such Quote Documents are listed and more fully described in ITQ Section 5.3 hereof.

- 2.4 Quote Date - The date when Quotes are to be received, opened and publicly read aloud as established by the Notice to Quoters as may be modified by Addenda.
- 2.5 Quote Submission - All documents presented by a Quoter for receipt and opening on the Quote Date.
- 2.6 Contract Documents - The Agreement and any exhibits thereto, Addenda (which pertain to the Contract Documents), Instructions to Quoters, Advertisement, Notice to Quoters, Quoter's Quote (including documentation accompanying the Quote and any post-Quote documentation submitted prior to the Notice of Award), Notice to Proceed, the Bonds, the General Conditions, the Additional Requirements Section, any supplemental conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement.
- 2.7 E-Verify Program - A electronic verification of work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996 (P.L. 104-208), Division C, Title IV, s.403(a), as amended, operated by the United States Department of Homeland Security or successor work authorization program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work authorization status of newly hired employees under the Immigration Reform and control Act of 1986 (P.L. 99-603).
- 2.8 Owner - The City of Greenfield acting by and through the Department or other agency designated above.
- 2.9 Project Manual - The bound set of documents, sample forms, and Contract Documents (excluding plans and Addenda) approved by the Owner for the Work and/or Project described in the Notice to Quoters and of which these Instructions to Quoters are a part.

In all other respects, terms used herein shall have the meanings as stated in the General Conditions or other Contract Documents.

### **3. EXAMINATION OF SITE AND DOCUMENTS**

- 3.1 Before the Quote Date, all Quoters shall carefully and thoroughly examine and inspect the entire site of the proposed Work and adjacent premises and the various means of approach and access thereto by means of a site inspection visit, and make all necessary investigations to inform themselves thoroughly as to the facilities necessary for delivering, placing and operating the necessary construction equipment, and for delivering and handling materials at the site, and shall inform themselves thoroughly as to any and all actual or potential difficulties, hindrances, delays and constraints involved in the commencement, prosecution and completion of the proposed Work in accordance with the requirements of the Contract Documents.
- 3.2 It shall be the sole responsibility of Quoters to make borings, test pits and to conduct such other investigations at or near the site of the proposed Work as they deem necessary to determine the character, location, and amount of materials to be encountered or other subsurface conditions which could affect the manner, cost or time required to perform the Work.
- 3.3 Quoters shall carefully and thoroughly examine the plans, specifications and other Contract and/or Project Manual Documents and shall assume the full risk of their own judgments as to the

nature, quality and amount of the whole of the Work to be done, and for the price Quote must assume all risk of any and all variances or errors in any computation or statement of amounts or quantities necessary to complete the Work in strict compliance with the Contract Documents.

- 3.4 Elevations of the existing ground surface or structures at the site of the Work as shown on the plans are believed to be reasonably correct, but are not guaranteed to be absolutely so and are presented only as an approximation. Quoters shall satisfy themselves as to the correctness of all elevations.
- 3.5 Information stated or depicted on plans concerning the location, dimensions, depth and other characteristics of underground structures and utilities is given only as general information and shall not be construed or relied upon by Quoters as a representation or assurance that such structures or utilities will be found or encountered as plotted, or that such information is complete or accurate. Quoters, therefore, shall satisfy themselves by such means as they may deem proper as to the location of all structures and utilities that may be encountered in construction of the Work and shall bear the risk of the number, type, location, dimensions and depth of all structures and utilities thus encountered.
- 3.6 The City of Greenfield Standard General Conditions for Construction Contracts, August 2018, is incorporated by reference as part of this quote. Copies are available on the City website at <https://www.greenfieldin.org/government/engineering>.

#### **4. CLARIFICATIONS AND ADDENDA**

- 4.1 If a Quoter finds conflicts, errors, discrepancies or ambiguities in the Contract Documents or any sample form, or if the Quoter is in doubt as to the intended meaning of any portion or provision therein, the Quoter shall at once give written notice thereof to the Owner's Representative, at least seven (7) consecutive calendar days prior to the Quote Date. No Quoter shall be allowed any extra compensation or time extension by reason of any conflict, error, discrepancy or ambiguity of which the Quoter had actual knowledge or reasonably should have known and which he/she failed to report within the period and in the manner required by these Instructions to Quoters.
- 4.2 No material changes, clarifications or interpretations of the Contract Documents will be issued except by written or graphic Addenda mailed or delivered to record holders of Contract Documents not less than three (3) days prior to the Quote Date. All such Addenda must be acknowledged by the Quoter and will become a part of the Contract Documents. The Owner will not be responsible for or bound by any oral or written interpretations or clarifications of the Contract Documents which anyone presumes to make on its behalf, except by an Addendum issued in accordance with this Section.

#### **5. QUOTE SUBMISSION**

- 5.1 All Quote Documents shall be placed within the sealed envelope which shall be plainly labeled on the outside with the name of the Project as set forth above, and the name and address of the Quoter along with the RFQ number. If forwarded by mail, the sealed envelope must be enclosed in another envelope addressed to: City of Greenfield, Clerk-Treasurer, 10 S. State Street, Greenfield, Indiana 46140.
- 5.2 All Quote Documents as herein prescribed must be submitted with and as integral parts of each Quote Submission and shall be subject to all requirements of the Contract Documents, including

drawings and these Instructions to Quoters. Quote Documents must be properly filled in and completed in every material respect and without interlineations, excisions, special conditions, qualifications or exceptions. Each Quote Document requiring a signature shall be signed by an individual duly authorized to execute such document on Quoter's behalf. A Quote executed by a corporation, joint venture, or other entity with an assumed name shall have the legal and correct name thereof followed by the word "by" and the signature and title of the officer or other person authorized to sign for it.

5.3 The Quote Documents to be thus submitted by each Quoter shall consist of all of the following (5.3.1):

.1 Quoter's Itemized Proposal and Declarations. A sample of this form is included in the Project Manual and must be utilized by all Quoters. Such document includes and consists of the following constituent "Parts":

"Part 1 - Quoter Information"

"Part 2 - Proposal (Quote)"

"Part 3 - Contract Items and Unit Prices"

"Part 4 - Contract Documents and Addenda"

"Part 5 - Exceptions"

"Part 6 - Nepotism Disclosure Form"

"Part 7 - Additional Declarations, including certification required by IC 5-22-16.5"

"Part 8 - Non-Collusion Affidavit"

"Part 9 - E-Verify Affidavit"

"Part 10- Signatures"

5.4 Quotes may be withdrawn in person by a Quoter during normal hours of business prior to the time fixed for opening of Quotes. In the event of a valid withdrawal of a Quote, the Quote Security of the withdrawing Quoter will be returned promptly. No Quote may be withdrawn after opening of Quotes has commenced except after expiration of such period following the Quote Date as specifically provided by law, plus any extension thereof as provided elsewhere in these Instructions to Quoters. Quoters failure to provide all completed documentation as required in ITQ Section 5.3 may result in Quote being deemed non-responsive.

## 6. POST-QUOTE REQUIREMENTS

Within three (3) business days of notification by Owner, the apparent lowest responsive Quoter will be required to submit additional documents and satisfy additional requirements as conditions to such Quoter being found by the Owner to be a responsible Quoter, as follows:

6.1 Proof of Insurability. The Quoter shall furnish: (1) proof of insurance showing existing coverage in accordance with the terms and amounts stated in the General Conditions, or (2) a letter or statement certifying that, in the event that the Quote is awarded by the Owner, an insurance company will provide the required coverage to the Quoter submitting the Quote. Such proof of insurance or the letter/statement shall be issued by a financially responsible insurance company authorized to do business in the State of Indiana.

6.2 Joint Venture Agreement. If the Quoter is a joint venture, partnership or other combination of two or more persons or entities, the Quoter shall submit a copy of the joint venture or other agreement by which such joint venture, partnership or other association has been formed, executed by all such participating persons or entities. If the Quote is signed by less than all

parties that comprise the Quoter, suitable written evidence of the authority of such signing party to bind all such parties must also be furnished.

- 6.3 Subcontractor Supplier List. Quoter shall submit a complete list of subcontractors and suppliers as required (POST-QUOTE-1).
- 6.4 Manufacturers List. The Quoter shall submit a complete list of all equipment and supplies that are listed in the Manufacturer's List (POST-QUOTE-2).
- 6.5 E-Verify Documentation. The Quoter shall submit verification that it is enrolled in and participating in the E-Verify program (POST-QUOTE-3).

## **7. QUOTE EVALUATION AND AWARD**

- 7.1 **Award of the Contract will be made to the lowest, responsive and responsible Quoter, where the Quote is reasonable and does not exceed the funds available for the Project.** The Owner reserves the right to reject all Quotes and may waive or allow a Quoter to correct errors, omissions or other irregularities in Quote Documents that are found not to have afforded the Quoter a substantial competitive advantage over other Quoters.
- 7.2 The Owner shall have the right to reject any Quote if investigation of the Quoter fails to satisfy the Owner that such Quoter is properly qualified to carry out the obligations and complete the Work. Any or all Quotes will be rejected if there is reason to believe that collusion exists among Quoters.
- 7.3 For unit price Contract Items, estimated quantities and unit prices will serve as the basis for determining the proposed price of each Quote. Patent math errors in statements of Quote prices or totals may be corrected by the Owner or Engineer, in which case the corrected amounts will be used for the purpose of Quote evaluation, comparison and other award considerations. However, neither the Owner nor the Engineer shall be required to discover or correct any error or omission in a Quote and the Quoter shall assume the risk of and be bound to the consequences of any such error or omission.
- 7.4 The Owner may, at its sole option, award the Contract to a Quoter on a conditional basis to afford the Quoter additional time and opportunity to submit required documents or to fulfill other requirements. In such case, the Owner will furnish to the Quoter a notice of conditional award which will establish (1) the additional conditions to be fulfilled for the award to become effective, and (2) the time limit within which such conditions shall be satisfied. If the Quoter fails to satisfy the conditions in the manner and within the time specified in such notice, the Owner may declare such Quoter to be non-responsible and award the Contract, conditionally or unconditionally, to another Quoter. Time limitations governing the Owner's award of the Contract shall be extended for such additional period as may be required to effectuate the conditional award procedure set forth in this sub-section, and no Quote may be withdrawn during such period of extension.

## **8. CONTRACT EXECUTION; SUBMITTALS**

- 8.1 Within three (3) business days after the award notice, the successful Quoter shall sign and deliver at least three (3) counterparts of the Agreement, utilizing the form thereof included in the Project Manual and make delivery thereof to the Owner, along with other documents as prescribed by the Contract Documents.



- 8.2 If the Quoter fails or neglects to execute and deliver the Agreement and other required documents as prescribed by the preceding sub-section, the Quoter shall be deemed to have repudiated the Contract and thereupon the award shall be null and void.
- 8.3 Concurrently with the execution and delivery of the Agreement to the Owner, or within such other period as the Owner may prescribe, the successful Quoter (Contractor) shall submit the following as conditions to the Quoter's right to proceed with and receive payment for any Work:
- .1 Proof of all required insurance coverage;
  - .2 The preliminary schedules required by Paragraph 2.7 of the General Conditions;
  - .3 Other post-Quote submittals required by the Contract Documents.

## 9. LIQUIDATED DAMAGES

- 9.1 The Contract Documents provide for the payment of liquidated damages in the event of unexcused failure by the Contractor to complete the Work within the time required by the Contract Documents. **Such liquidated damages are to be assessed and recovered at the rate of \$200.00 per day that expires after (1) Owner notifies Contractor that Work is not being performed or is being performed poorly; and (2) Owner fails, after three (3) days written notice from Owner, to cure the Work subject to such notice. Payment of liquidated damages shall be in addition to any other remedies available to Owner.**
- 9.2 The per diem rate(s) of liquidated damages established by the preceding sub-section have been determined and are intended as reasonable prospective estimate(s) of the type and amount of actual damages which the Owner may sustain in the event of such delay(s). Submission of a Quote shall constitute an unconditional acknowledgment and agreement by the Quoter that such liquidated damages are fair and reasonable and do not and will not constitute a penalty, and that such liquidated damages may be assessed and recovered by the Owner as against the successful Quoter/Contractor and its Surety in lieu of actual damages for delayed completion.

## 10. CHANGE ORDERS

- 10.1 During the course of the Work, should the Owner or Quoter determine that additional work which was foreseeable is required, such work shall not be automatically awarded through change orders. However, the Owner reserves the right to award additional work which was foreseeable to the original Quoter where doing so is in the best interest of the Owner. All such awards are and will remain subject to necessary approvals.

## END OF INSTRUCTIONS TO QUOTERS

**PART 1**  
**QUOTER'S ITEMIZED PROPOSAL**  
**AND DECLARATIONS**  
City of Greenfield

*Instructions to Quoters:*

*This form shall be utilized by all Quoters. Except as otherwise specifically provided, all Parts shall be fully and accurately filled in and completed and notarized.*

Project: **Landscape Maintenance Services: SR 9 Corridor & Downtown Greenfield - 2023**

Proposal For Construction of: **Landscape maintenance services for landscaped medians located along SR 9 from McKenzie Rd to Progress Pkwy and landscaped beds scattered throughout downtown Greenfield for Calendar Year 2023.**

Date: \_\_\_\_\_

To: **City of Greenfield, Department of Engineering**  
**10 S. State Street, Greenfield, Indiana 46140**

**PART 1**  
**QUOTER INFORMATION**  
**(Print)**

1.1 Quoter Name: \_\_\_\_\_

1.2 Quoter Address:      Street Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone #: (    ) \_\_\_\_\_ Fax #: (    ) \_\_\_\_\_  
Email Address: \_\_\_\_\_

1.3 Quoter is a/an [mark one]:  
 Individual       Partnership       Indiana Corporation  
 Foreign (Out of State) Corporation  
 Joint Venture  
Other: \_\_\_\_\_

**PART 2**  
**PROPOSAL (QUOTE)**

- 2.1 The undersigned Quoter proposes to furnish all necessary labor, machinery, tools, apparatus, materials, equipment, service and other necessary supplies, and to perform and fulfill all obligations incident thereto in strict accordance with and within the time(s) provided by the terms and conditions of the Contract Documents for the above described Work and Project, including any and all addenda thereto, for the Lump Sum Total of \_\_\_\_\_ Dollars (\$\_\_\_\_\_).
- 2.2 By submitting quote the Quoter agrees the quote proposal and price(s) contained herein shall be valid for ninety (90) days from quote opening.

**PART 3**  
**CONTRACT ITEMS AND UNIT PRICES**

Contract Item No.	Item Description	Item Unit	Estimated Quantity	Prices in Figures	
				Unit Price	Total Price for Item

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*N/A - LUMP SUM QUOTE*

**PART 4**  
**CONTRACT DOCUMENTS AND ADDENDA**

4.1 The Quoter agrees to be bound by the terms and provisions of all Contract Documents as defined in the General Conditions and incorporates such Contract Documents herein by reference

4.2 The Quoter acknowledges receipt of the following addenda:

<u>Addendum Number</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

**PART 5**  
**EXCEPTIONS**

*Instructions to Quoters:*

- 5.1 *The Quoter shall fully state each exception taken to the Specifications or other Contract Documents in Section 5.3 of this Part.*
  
- 5.2 *Quoter is cautioned that any exception taken by Quoter and deemed by Owner to be a material qualification or variance from the terms of the Contract Documents may result in this Quote being rejected as non-responsive.*

5.3 *Exceptions:*

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**PART 6**  
**NEPOTISM DISCLOSURE**

Contractor: \_\_\_\_\_

Project: \_\_\_\_\_

For purposes of compliance with Indiana Code Chap. 36-1-21, please specify below whether Contractor (individual), or a person who wholly or partially owns Contractor (business), is a relative, as that term is defined by Indiana Code § 36-1-21-3, of either the Mayor of Greenfield, Indiana, or a member of the City Council of Greenfield, Indiana.

- Contractor (individual) or Contractor (business) does NOT have a relative who is either the Mayor of Greenfield, Indiana or a member of the City Council of Greenfield, Indiana.
- Contractor (individual) or Contractor (business) DOES have a relative who is either the Mayor of Greenfield, Indiana or member of the City Council of Greenfield, Indiana (must specify all relatives below):

\_\_\_\_\_

Mayor Chuck Fewell

City Councilor [please specify name of Councilor(s)]:

\_\_\_\_\_

Name of Authorized Representative (Printed):

\_\_\_\_\_

Signature of Authorized Representative:

\_\_\_\_\_

Date: \_\_\_\_\_

**PART 7**  
**ADDITIONAL DECLARATIONS**

- 7.1 Quoter certifies for itself and all its subcontractors compliance with existing laws of the City of Greenfield, the State of Indiana and the United States regarding (a) prohibition of discrimination in employment practices on the basis of race, sex, disability, religion, national origin, disabled veteran status and Vietnam-era veteran status.
- 7.2 Quoter certifies that it has thoroughly examined the site of the Work and informed itself fully regarding all conditions under which he/she will be obligated to operate and that in any way affect the Work, and knows, understands and accepts the existing conditions. Quoter further certifies that it has thoroughly reviewed the Contract Documents, including all Addenda, and has had the opportunity to ask questions and obtain interpretations or clarifications concerning Contract Documents.
- 7.3 Hiring Practices. The Quoter shall, upon request of the Owner, make available its policies, practices and standards for the hiring of applicants, except as prohibited under Indiana Code section 22-2-17-3, to the extent such information is related to the provision of services under this Quote.



**PART 8**  
**NON-COLLUSION AFFIDAVIT**

The individual person(s) executing this Proposal, being first duly sworn, depose(s) and state(s) that the Quoter has not directly or indirectly entered into a combination, collusion, undertaking or agreement with any other Quoter or person (i) relative to the price(s) proposed herein or to be Quote by another person, or (ii) to prevent any person from Quoting, or (iii) to induce a person to refrain from Quoting; and furthermore, this Quote Proposal is made and submitted without reference to any other Quotes and without agreement, understanding or combination, either directly or indirectly, with any persons with reference to such Quoting in any way or manner whatsoever.

**PART 9**  
**E-VERIFY PROGRAM**

Pursuant to Indiana Code 22-5-1.7-11, the contractor awarded the Quote is required to enroll in and verify the work eligibility status of all its newly hired employees through the E-Verify program. The contractor who is awarded the Quote is not required to verify the work eligibility status of all its newly hired employees through the E-Verify program if the E-Verify program no longer exists.

The individual person(s) executing this Proposal, being first duly sworn, depose(s) and state(s) that the Quoter does not knowingly employ an unauthorized alien. The undersigned further affirms that, prior to entering into an agreement for this Quote, the undersigned business entity will enroll in and agrees to verify the work eligibility status of all its newly hired employees through the E-Verify program.

**PART 10**  
**SIGNATURES**

*[Signature by or on behalf of the Quoter in the spaces provided below shall constitute execution of each and every Part of this Itemized Proposal and Declarations document. SIGNATURE MUST BE PROPERLY NOTARIZED.]*

Written Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

*Important - Notary Signature and Seal Required in the Space Below*

STATE OF \_\_\_\_\_

SS:

COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

My commission expires: \_\_\_\_\_ (Signed) \_\_\_\_\_

Residing in \_\_\_\_\_ County, State of \_\_\_\_\_

**POST QUOTE SUBMITTAL**  
**SUBCONTRACTOR/SUPPLIER PARTICIPATION**

**A. SUBCONTRACTORS AND SUPPLIERS LIST**

*Instructions to Quoters: The Quoter shall submit a completed Subcontractor/Supplier list (see below) as required in ITQ 6.3.*

*The Quoter shall enter the names, the type of work to be done, and the price, in the Subcontractors/Suppliers List for each subcontractor/supplier that the Quoter proposes to use for any part of the Work for the Project at an agreed price of \$10,000.00 or greater, as part of the total amount Quote as stated above in Part 2.*

*Only one subcontractor/supplier shall be listed for each line. Upon award of a contract, the named subcontractors/suppliers shall be employed to perform the work, unless changes are specifically authorized by the Owner. Failure to furnish all information requested may render the Quote non-responsive if it is determined that such omission materially affords the Quoter a substantial advantage over other Quoters.*

*Except as otherwise specifically stated by the Quoter in this Part, omission of any names of subcontractors/suppliers herein shall constitute an affirmative representation and statement that the Quoter proposes to use its own work force for that portion of the Work*

*Quoter's attention is directed to paragraphs 6.8, 6.9, and 6.11 of the City of Greenfield Standard General Conditions for Construction Contracts as they relate to use of subcontractors/suppliers.*

Subcontractor Name	Work	Price
		\$
		\$
		\$
		\$
		\$
		\$
Supplier Name	Work	Price
		\$
		\$
		\$
		\$
		\$
		\$

(please duplicate and use this form, if additional sheets are necessary)

**POST QUOTE SUBMITTAL**  
**MANUFACTURERS LIST**

*Instructions to Quoters:*

*The Quoter shall enter, in the spaces provided below, the name of the manufacturer for ALL material and equipment listed below, to be incorporated into the Work.*

***Failure to enter a manufacturer's name for each listed equipment item may render the Quote non-responsive.***

*Preliminary acceptance of equipment listed by the manufacture's name shall not in any way constitute a waiver of the Drawing and Specification requirements covering such equipment. Acceptance will be based on full conformity with the Drawings and Specifications covering the equipment.*

***The Information submitted on this Post-Quote-2 page does not alleviate the Quoter from submitting the same required Subcontractor/Supplier information on the Post-Quote-1 page.***

Material/Equipment Item

Manufacturer

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**POST QUOTE SUBMITTAL**  
**E-VERIFY DOCUMENTATION**  
**SEE ITQ SECTION 6.5**

Pursuant to Indiana Code 22-5-1.7-11.1 the Contractor shall provide documentation that it has enrolled and is participating in the E-Verify program. Contractor is required to submit proof from the E-Verify Program that it is currently enrolled in the Program. An example of confirmation is the confirmation e-mail received from E-Verify that the Contractor has successfully enrolled in E-Verify.

**AGREEMENT**  
**City of Greenfield**

THIS AGREEMENT is made and entered into as of the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

by and between

“OWNER”: City of Greenfield, Indiana, by and through its Board of Public Works  
10 S. State Street, Greenfield, Indiana 46140

and

“CONTRACTOR”:

concerning the following:

“PROJECT”: **Landscape Maintenance Services: SR 9 Corridor & Downtown Greenfield – 2023**

“WORK”: **Landscape maintenance services for landscaped medians located along SR 9 from McKenzie Rd to Progress Pkwy and landscaped beds scattered throughout downtown Greenfield for Calendar Year 2023.**

“ENGINEER”: N/A

RECITALS:

- A. The OWNER has heretofore caused to be prepared certain plans, specifications and other “Contract Documents” as hereinafter listed pertaining to the above described Project and Work, and the CONTRACTOR has filed Proposal to furnish said labor, tools, material, equipment, services, and perform said Work upon the terms and for the price(s) therein fully stated and set forth;
- B. The said Contract Documents accurately and fully describe the terms and conditions upon which the CONTRACTOR is willing to furnish the labor, tools, material, equipment, services, and perform the Work called for by the Contract Documents and in the manner and time and for the price(s) set forth herein.

THE OWNER AND CONTRACTOR AGREE AS FOLLOWS:

1. Contract Documents

1.1 This Agreement consists of the following Contract Documents all of which are as fully a part of this Agreement as if set out verbatim herein or attached hereto and the same do in all particulars become the Agreement between the parties hereto in all matters and things set forth herein and described:

- .1 This Agreement;
- .2 All Addenda issued prior to receipt of Quotes, whether or not receipt thereof has been acknowledged by CONTRACTOR in its Quote;
- .3 Special Conditions;
- .4 General Conditions;
- .5 CONTRACTOR's Itemized Proposal and Declarations;
- .6 Technical Specifications;
- .7 Plans;
- .8 City Standards and Specifications;
- .9 INDOT Standard Drawings;
- .10 INDOT Supplemental Specifications Sections 200 Series through Sections 900 Series;
- .11 INDOT Standard Specifications Sections 200 Series through Sections 900 Series;
- .12 Additional Requirements Section of the Quote Documents (change order forms, etc.);
- .13 Instructions to Quoters; and
- .14 Advertisement or Notice to Quoters;

1.2 In resolving conflicts, errors, discrepancies and disputes concerning the nature, character, scope or extent of Work to be performed or furnished by the CONTRACTOR, or other rights and obligations of the OWNER and CONTRACTOR, arising from or prescribed by one or more of the Contract Documents, the following rules shall govern:

- .1 A requirement occurring in one Contract Document is as binding as though occurring in all Contract Documents;
- .2 Calculated dimensions shall govern over scaled dimensions;
- .3 The Contract Documents shall be given precedence in the order listed in Paragraph 1.1 above; and
- .4 In documents of equal priority, if any such conflict, error, discrepancy or dispute cannot be resolved or reconciled by application of the rules stated in Subparagraphs 1.2.1 through 1.2.3, then the provision expressing the greater quantity, quality, or scope of work, or imposing the greater obligation upon the CONTRACTOR or affording the greater right or remedy to the OWNER shall govern, without regard to the party who drafted such provision.

2. Contract Price

- 2.1 The CONTRACTOR shall, in strict conformity with the Contract Documents, furnish all labor, tools, materials, equipment, services, assume and fulfill all obligations and perform all Work required to construct, complete, and make ready for use by the OWNER for the lump sum of \_\_\_\_\_ dollars (\$\_\_\_\_\_).
- 2.2 The above stated Contract Sum will be paid to the CONTRACTOR in the manner and at such times as set forth in the Contract Documents.

3. Contract Time

- 3.1 It is hereby understood and mutually agreed, by and between the CONTRACTOR and OWNER, that the date of commencement and the time for completion of the Work as specified in the Contract Documents are ESSENTIAL CONDITIONS of this Agreement.
- 3.2 The CONTRACTOR agrees that the Work shall be commenced no later than the date indicated in the Notice to Proceed and that the Work shall be prosecuted regularly, diligently and uninterruptedly at such a rate of progress as will insure **completion in accordance with the maintenance schedule in the technical specifications.**
- 3.3 The CONTRACTOR and OWNER acknowledge and agree that the time allotted by this Agreement for the performance and completion of the Work is reasonable and takes into account any and all risks and adverse conditions assumed by CONTRACTOR hereunder.



4. Liquidated Damages

The CONTRACTOR and OWNER recognize and contemplate that unexcused failure by the CONTRACTOR to complete the Work within the Contract Time will cause the OWNER and the Public to suffer financial losses or inconvenience the full and exact extent and character of which cannot be measured as a basis for recovery by the OWNER of actual damages, and that liquidated damages as prescribed in the Contract Documents represent a fair, reasonable and appropriate estimate thereof. Accordingly, the CONTRACTOR agrees that such liquidated damages may be assessed and recovered by the OWNER, as against CONTRACTOR and its Surety, in the event of delayed completion and without the OWNER being required to present any evidence of the amount or character of actual damages sustained by reason thereof. **Such liquidated damages shall be assessed and recovered at the rate of \$200.00 per day that expires after (1) Owner notifies Contractor that Work is not being performed or is being performed poorly; and (2) Owner fails, after three (3) days written notice from Owner, to cure the Work subject to such notice. Payment of liquidated damages shall be in addition to any other remedies available to Owner.**

5. Effective Date

This Agreement shall be deemed effective as of the date and year first above written notwithstanding the date on which this Agreement has been executed by the respective parties or their representatives as stated below.

[REST OF PAGE INTENTIONALLY LEFT BLANK]

“CONTRACTOR” SIGNATURE:

IN TESTIMONY THEREOF, the CONTRACTOR has hereunder set his hand this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Firm Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

By: \_\_\_\_\_  
Signature

Printed: \_\_\_\_\_

Title: \_\_\_\_\_

“OWNER” SIGNATURES:

IN WITNESS WHEREOF, the OWNER does hereby accept the foregoing Agreement, and has herewith set his/her hand this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

For and on behalf of the City of Greenfield by its Board of Public Works.

\_\_\_\_\_  
Chuck Fewell, Mayor,

\_\_\_\_\_  
Kelly McClarnon, Member

\_\_\_\_\_  
Larry J. Breese, Member

\_\_\_\_\_  
Katherine N. Locke, Member

\_\_\_\_\_  
Glenna Shelby, Member

ATTEST:

\_\_\_\_\_  
Lori Elmore, Clerk Treasurer

Date: \_\_\_\_\_

## ADDITIONAL REQUIREMENTS

### TABLE OF CONTENTS

City of Greenfield Sample Change Order Forms	AR-2
Additional Indiana Code (IC) Requirements	AR-7
IC 5-16-13	AR-7

Following are specimen forms proposed to be used for the issuance of change orders, field orders, and work directive changes. Procedure for the development, submittal and processing of these forms will be discussed during the preconstruction conference.

CITY OF GREENFIELD

OWNER: CITY OF GREENFIELD

FIELD ORDER NUMBER: \_\_\_\_\_

DATE: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

PROJECT NO: \_\_\_\_\_

---

You are hereby directed to execute promptly this Field Order which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.

If you consider that a change in Contract Sum or Contract Time is required, please submit your itemized proposal to the Engineer immediately and before proceeding with this Work. If your proposal is found to be satisfactory and in proper order, this Field Order will in that event be superseded by a Change Order.

---

Description:

Attachments:

---

PROJECT MANAGER:

By: \_\_\_\_\_

Date: \_\_\_\_\_

CITY OF GREENFIELD

TO: WORK DIRECTIVE CHANGE NO. \_\_\_\_\_  
DATE: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
PROJECT NO.: \_\_\_\_\_

Specification Reference: \_\_\_\_\_

Drawing Reference: \_\_\_\_\_

DESCRIPTION OF WORK COVERED BY THIS DIRECTIVE CHANGE:

REASON FOR THIS ORDER:

AUTHORIZATION:

THIS WORK DIRECTIVE CHANGE AUTHORIZES THE WORK TO BE COMPLETED AS OUTLINED. A Contract Change Order in the amount of \$\_\_\_\_\_ will be issued to you in the near future to cover this Work Directive Change.

PROJECT COMPLETION DATE: ADD/DEDUCT/UNCHANGED \_\_\_\_\_ DAYS.

By: \_\_\_\_\_  
Project Manager (Engineering)

By: \_\_\_\_\_  
Resident Project Representative

By: \_\_\_\_\_  
Project Manager (Construction)

By: \_\_\_\_\_  
Administrator of Construction Services

CITY OF GREENFIELD

TO: REQUEST FOR PROPOSAL NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
PROJECT NO.: \_\_\_\_\_

Specification Reference: \_\_\_\_\_

Drawing Reference: \_\_\_\_\_ Drawing Date: \_\_\_\_\_

Identification of Attachments: \_\_\_\_\_

Please submit within fifteen calendar days of this request date a proposal showing increase, decrease or no change in contract price and/or contract time. Proposal shall be accompanied by four (4) copies of breakdown showing quantities, cost of material, equipment, labor, overhead, profit and basis for the additional time if any.

DESCRIPTION OF PROPOSED CHANGE COVERED BY THIS REQUEST:

REASON FOR CHANGE:

SPECIAL INSTRUCTIONS:

THIS REQUEST DOES NOT AUTHORIZE YOU TO PROCEED WITH THE ABOVE WORK NOR STOP PREVIOUSLY SCHEDULED WORK. Upon approval a Contract Change Order and a Notice to Proceed will be issued.

Please state in your proposal the effect the acceptance of this REQUEST will have on the project completion, if accepted within \_\_\_ days of proposal due date.

YOUR PROPOSAL DUE DATE: \_\_\_\_\_

By: \_\_\_\_\_  
Project Manager Date

CITY OF GREENFIELD

TO: CONTRACT CHANGE REQUEST NO.: \_\_\_\_\_

DATE: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

FROM:

IT IS REQUESTED THAT A CONTRACT CHANGE BE MADE TO THE ABOVE REFERENCED CONTRACT.

1. SCOPE OF WORK (USE ADDITIONAL PAGES IF REQUIRED. ALSO LIST OTHER CONTRACTS INVOLVED.)

\_\_\_\_\_  
\_\_\_\_\_

2. REASON FOR CHANGE:

\_\_\_\_\_  
\_\_\_\_\_

3. APPROXIMATE COST CHANGE TO CONTRACT PRICE:

\_\_\_\_\_

4. WILL THE CONTRACT NEED ADDITIONAL CONTRACT TIME TO COMPLETE THE CHANGE IN WORK SCOPE? \_\_\_\_\_ -YES \_\_\_\_\_ -NO \_\_\_\_\_ -(CALENDAR DAYS)

5. WILL THE CONTRACTOR NEED ADDITIONAL PERSONNEL TO COMPLETE THE CHANGE IN WORK SCOPE? \_\_\_\_\_ -YES \_\_\_\_\_ -NO

IF NO, TRADE(S): \_\_\_\_\_

NO. OF PERSONNEL: \_\_\_\_\_

DURATION: \_\_\_\_\_

6. IDENTIFICATION OF ATTACHMENTS:

\_\_\_\_\_  
\_\_\_\_\_

DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

PREPARED

REVIEWED BY: \_\_\_\_\_ REVIEWED BY: \_\_\_\_\_

Project Manager

Comments and Recommendation:

\_\_\_\_\_

CITY OF GREENFIELD

TO: CONTRACT CHANGE ORDER NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
ORIGINAL CITY P.O. NO.: \_\_\_\_\_

I. You are directed to make the following changes in this contract:

<u>ITEM</u>	<u>AMOUNT</u>	<u>SCHEDULED ADJUSTMENT</u> <u>(+) OR (-) DAYS</u>
-------------	---------------	-------------------------------------------------------

II. The following referenced documents further describe the changes outlined in Paragraph I, and are to be considered a part of this Change Order:

R.F.P.: \_\_\_\_\_ W.D.C.: \_\_\_\_\_

The changes result in the following adjustment of Contract Price and Contract Time:

Contract Sum prior to this Change Order	\$ _____
Contract Sum will be increased/decreased by this Change Order	\$ _____
New Contract Sum including this Change Order	\$ _____
Contract Time Prior to this Change Order _____	Substantial Completion Date
_____	Final Completion Date
Net increased/decreased resulting from this Change Order _____	Days
Current Contract Time including this Change Order _____	Substantial Completion Date
_____	Final Completion Date

This Change Order is for full and final settlement of all direct, indirect, impact costs and time extension incurred at any time resulting from the performance of the changed work.

The Above Changes Are Recommended:

The Above Changes Are Accepted:

Approved:

\_\_\_\_\_  
Engineer

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City/State/Zip

\_\_\_\_\_  
City/State/Zip

\_\_\_\_\_  
City/State/Zip

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

Phone \_\_\_\_\_

Phone \_\_\_\_\_

Phone \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_



## INDIANA CODE (IC) ADDITIONAL REQUIREMENTS

### I. IC 5-16-13

1. The definitions in IC 5-16-3 are incorporated by reference into this Section.
2. In accordance with IC 5-16-13-9, the Bidder, as a “Tier 1 contractor” (as defined in IC 5-16-3-4), if awarded a contract for the Work contemplated by this Bid must contribute:
  - (a) Work performed by the tier 1 contractor’s employees;
  - (b) Materials supplied directly by the tier 1 contractor;
  - (c) Services supplied directly by the tier 1 contractor’s employees; or
  - (d) Any combination of subdivisions (a) through (d);at least fifteen percent (15%) of the tier 1 contractor’s total contract price as determined at the time the contract is awarded.

**NOTE:** In accordance with Subsection 6.8.1 of the City of Greenfield Standard General Conditions for Construction Contracts (August 2018), the successful Bidder is required to perform with its own organization Work amounting to **not less than thirty percent (30%)** of the original or revised contract amount, whichever is less.

3. In accordance with IC 5-16-13-10, if awarded a contract for the Work contemplated by this Bid, the Bidder, as a “Tier 1 contractor”, and each “Tier 2 contractor” and “Tier 3 contractor” (as defined in IC 5-16-3-4 (i.e., subcontractors and sub-subcontractors)) employed to perform Work on the Project must maintain general liability insurance in at least the following amounts:
  - (a) For the each occurrence limit, one million dollars (\$1,000,000).
  - (b) For the general aggregate limit, two million dollars (\$2,000,000).

**NOTE:** The successful Bidder, its subcontractors and sub-subcontractors, are required to maintain all insurance coverage as provided for in Article 5 of the City of Greenfield Standard General Conditions for Construction Contracts (August 2018).

4. In accordance with IC 5-16-13-11, if awarded a contract for the Work contemplated by this Bid, the Bidder as a “Tier 1 contractor” and each “Tier 2 contractor” and “Tier 3 contractor” employed to perform Work on the Project:
  - (a) Shall submit, before Work begins, the E-Verify case verification number for each individual who is required to be verified under IC 22-5-1.7. An individual who is required to be verified under IC 22-5-1.7 whose final case result is final non-confirmation may not be employed on the Project.
  - (b) May not pay cash to any individual employed by the contractor for Work done by the individual on the Project.
  - (c) Must be in compliance with the federal Fair Labor Standards Act of 1938, as amended (29 U.S.C. 201-209) and IC 22-2-2-1 through IC 22-2-2-8.
  - (d) Must be in compliance with IC 22-3-5-1 and IC 22-3-7-34.
  - (e) Must be in compliance with IC 22-4-1 through IC 22-4-39.5.
  - (f) Must be in compliance with IC 4-13-18-1 through IC 4-13-18-7.
  - (g) Must comply with IC 5-16-13-12, if applicable.

5. In accordance with IC 5-16-13-12, if awarded a contract for the Work contemplated by this Bid, the Bidder as a “Tier 1 contractor” and each “Tier 2 contractor” employed to perform Work on the Project,

if they employ fifty (50) or more journeymen:

- (a) Must provide access to a training program applicable to the tasks to be performed in the normal course of the employee's employment with the contractor.
- (b) Shall participate in an apprenticeship training program that meets the standards established by the United States Department of Labor, Bureau of Apprenticeship and Training.
- (c) May comply with this section through any of the following:
  - (1) An apprenticeship program.
  - (2) A program offered by Ivy Tech Community College of Indiana.
  - (3) A program offered by Vincennes University.
  - (4) A program established by or for the contractor.
  - (5) A program offered by an entity sponsored by the United States Department of Labor, Bureau of Apprenticeship and Training.
  - (6) A program that results in the award of an industry recognized portable certification.

- 6. In accordance with IC 5-16-13-13, if awarded a contract for the Work contemplated by this Bid, the payroll and related records of the Bidder as a "Tier 1 contractor" and each "Tier 2 contractor" and "Tier 3 contractor" employed to perform Work on the Project, must be:
  - (a) Preserved by the contractor for a period of three (3) years after completion of the Project Work; and
  - (b) Open to inspection by the Indiana Department of Workforce Development (DWD).

In accordance with IC 5-16-13-14, if the City of Greenfield suspects a misclassification of one (1) or more workers by a contractor in any contractor tier working on the Project may request in writing that DWD investigate the suspected worker misclassification, and in so doing shall provide to DWD any information or records that the City has concerning the misclassification. DWD may investigate such a request, and if it finds information or records that support a finding that worker misclassification has occurred, DWD may refer the matter to the appropriate agency or official for further action.

- 7. In accordance with IC 5-16-13-15, if the City of Greenfield reasonably suspects the Bidder awarded a contract for the Work contemplated by this Bid or any "Tier 2 contractor" and "Tier 3 contractor" employed to perform Work on the Project has violated a provision of IC 5-16-13, the City is required to do one (1) of the following:
  - (a) If the suspected violation concerns or is related to any of the following provisions, the City shall refer the matter to the appropriate agency as follows:
    - (1) For a suspected violation of IC 5-16-13-11(1) (E-Verify), the Indiana Department of Labor.
    - (2) For a suspected violation of IC 5-16-13-11(3) (the federal FLSA or state minimum wage law), the Indiana Department of Labor.
    - (3) For a suspected violation of IC 5-16-13-11(4) (worker's compensation or occupational diseases), the Worker's Compensation Board of Indiana.
    - (4) For a suspected violation of IC 5-16-13-11(5) (unemployment insurance), the Department of Workforce Development.
  - (b) If the suspected violation concerns a provision of IC 5-16-13 other than a provision listed in subdivision (a), the City shall require the contractor to remedy the violation not later than thirty (30) days after the City notifies the contractor of the violation in accordance with IC 5-16-13-15(b)(2). During the thirty (30) day period, the contractor may continue to work on the Project; however, if the contractor fails to remedy the violation within the thirty (30) day period, the City shall find the contractor not responsible and shall determine the length of time the contractor is considered not responsible by the City based on the severity of the violation. The period during which a contractor is considered not responsible:

- (1) May not exceed forty-eight (48) months; and
- (2) Begins on the date of substantial completion of the Project.

A finding by the City that a contractor is not responsible under this section may not be used by another public agency in making a determination as to whether the contractor is responsible for purposes of that public agency's award of a public works contract to that contractor.

**Project:**                    *Landscape Maintenance Services on SR 9 & Downtown Greenfield*

In accordance with the terms and conditions of the attached Agreement, Contractor shall do, perform, and carry out in a good and professional manner the following services for the Calendar year 2023:

**I.    Inspections (should be performed same day when done each time, so Owner knows when to expect reports)**

- a. Contractor shall make general inspections of the Project Area (as defined in Section XII, herein) on a bi-weekly basis during the growing season, defined as April 1 – October 31, and monthly during the off-season, defined as January 1 – March 30; November 1 – December 31.
- b. All reports shall be provided to the Owner within (48) forty-eight hours of inspection via email.
- c. Contractor shall notify Owner, in writing, any irregularities with the property. This includes, but is not limited to: areas that appear to have irrigation problems, damaged/missing plant material, and damaged beds.
- d. Contractor is to also offer suggestions and provide pricing for any replacements and/or improvements needed for the property when noted during their inspections and at the request of Owner.

**II.   Landscape Bed Treatment**

- a. Weed control shall be determined by the contractor for pre-emergent control of crabgrass, broadleaf weeds, dandelions, etc. Owner’s expectation is that weeds shall not be visible at any time.
- b. Herbicide applications are as needed to keep the landscape beds free of visible weeds.

**III.   Tree and Shrub Care**

- a. Shrubs and trees in the bed areas shall be fertilized with a general purpose granular fertilizer containing the appropriate nutrient combinations at a rate necessary for proper plant health.
- b. All dead and damaged branches shall be removed as needed.
- c. Contractor shall monitor the health of all trees and shrubs. Contractor shall administer all necessary measures to maintain proper plant strength.
- d. In the fall, dormant oil shall be applied to the plant materials that cannot be sprayed in the early spring to suppress the activity of scale, mites, aphid eggs and mealy bugs.
- e. A general insecticide/miticide spray shall be applied to the control the common insects – this is to be ongoing and as needed.
- f. Insect control program shall be used to reduce the insect population so the health and vigor of the plants are not altered.
- g. Fungicide program shall be designed for scab and rust on crabapples and hawthorns. This is a 3-step program: applied at bud break.
- h. All median street trees shall receive one deep root fertilization during the growing season.

**IV. Pruning of Shrubs and Ornamental Trees**

- a. Shrubs and ornamental trees shall be pruned as needed for the pre-season. All plants will be pruned to retain the plants natural form and remain within the guidelines of the landscape architect's intent and to proper horticultural industry standards.
- b. Pruning shall not be done while the flowering shrubs or trees are in full bloom.
- c. Maintain the base of the trees and shrubs in a manner designed to provide a neat appearance. This will include removing weeds, dead limbs and unsightly sprouts from around the base as well as using herbicide to reduce the growth of weeds around the trunk, only that such herbicides do not present a threat to the health and vigor of such trees or shrubs.

**V. Mulch and Bed Care (set up is usually in March, weather permitting)**

- a. All planting beds shall remain clear of all debris. This includes but is not limited to all natural and man-made debris.
- b. All planting beds shall be weeded and remain neat and weed-free at all times.
- c. Appropriate application of a pre-emergent weed control shall be applied to all beds in accordance with proper horticultural industry standards.
- d. Mulch installation includes delivery and spreading of hardwood bark mulch to a total depth not to exceed three (3) inches.
- e. Edges of mulch beds shall be initially cut by mechanical means and touched up as needed with appropriate equipment to ensure a neat, crisp and clean edge.
- f. All beds are to have weeding performed no less than biweekly, as needed, at the same time as the Inspections in Section I.

**VI. Perennial Care (Spring/Summer/Fall)**

- a. All plant beds will be maintained throughout the season to provide health and colorful plant life. This includes preparation of bed, planting material, and fertilization (usually happens in April/May). Maintaining material includes ensuring that the plants/flowers shall be fed, watered, pruned, weeded, and treated for insect control.
- b. In winter, Contractor shall prepare beds for freeze.
- c. All plants will be inspected for insect damage. Contractor shall provide a schedule for inspection of all plant material and recommend necessary chemical controls procedures.

**VII. Spring Clean-Up (after hard freeze threat is over)**

- a. Blowing out and removing debris in planting beds and tree bases.
- b. Spring clean-up must be completed by April 1<sup>st</sup>, weather permitting.
- c. De-winterize irrigation system and start-up procedure

**VIII. Fall Clean-Up (October)**

- a. The removal of leaves and debris from the turf and bed areas
- b. The bulk of fall clean-up shall be completed by November 1 (weather permitting) – there may be additional requests after this time for leaf clean up.
- c. Winterize irrigation system and prepare for freeze (this should be completed prior to forecasted hard freeze)

**IX. Material & Labor Cost**

- a. Materials and labor used in the performance of the proposed duties will be included in the quoted price submitted by the Contractor, this includes, but is not limited to: mulch, equipment, fuel, herbicide, and fertilizer. Replacements for damaged plants will be quantified and paid for in a separate quote, as needed.
- b. Any additional cost for material, time, or labor must first be approved in writing by Owner.

**X. General Provisions**

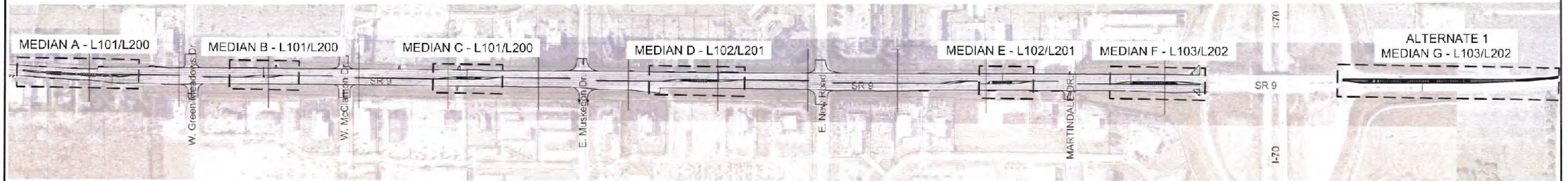
- a. Contractor shall provide office hours between the times of 8:00 a.m. to 4:00 p.m. Monday through Friday. Contractor shall perform services any day of the week between the hours of 6:00 a.m. and 7:00 p.m., unless otherwise requested by Owner or Contractor and mutually agreed upon by Owner and Contractor.
- b. Contractor shall maintain on a continuing basis, a supervisor who can effectively communicate with Ownership to discuss day to day issues, general concerns, and serve as Ownership's point of contact.
- c. Contractor will provide a representative to meet with Ownership upon request.
- d. Contractor shall be responsible for maintaining a high level of safety in its equipment and work conditions and warrants that all equipment will be of such type as to cause no hazard, damage or danger reasonably foreseeable.
- e. All personnel on site shall be uniformed, in a neat and clean manner at all times.
- f. Contractor personnel shall be relieved of all duties and dismissed from the property if the Owner finds those individuals inappropriate for the property needs.
- g. All materials to be used shall conform to all state and federal laws and regulations and must be approved by Owner in writing. All equipment, materials, and product data shall be submitted to Owner, in writing, prior to use or application on the property.
- h. Contractor shall furnish Owner with all Material Safety Data Sheets.
- i. Contractor will not store or place any materials or equipment on the property without authorization from Owner.
- j. Most of the Project Area is within INDOT right-of-way. Owner will apply for yearly INDOT permit on behalf of Contractor to perform the maintenance services in the Agreement. Contractor will be expected to comply with INDOT right of way permit terms and conditions and provide all equipment required to provide any maintenance of traffic and/or temporary lane closures required to perform the Work.

**XI. Guarantee and Replacement**

- a. Contractor shall guarantee installation of all new plant material for one (1) year. If at any time during this period any material fails, Contractor shall replace and install new material at no charge.
- b. Contractor is exempt from acts of God. Acts of God are defined as those caused by tornados, hail, fire, flood, earthquake and freezing.

**XII. Project Area**

- a. Maps of the above-listed landscape beds are attached hereto and incorporated herein.



## DRAWING NOTES

### GENERAL NOTES:

- HITCHCOCK DESIGN GROUP CLAIMS NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THE SURVEY. IF ANY DISCREPANCIES ARE FOUND BETWEEN THE SURVEY PLAN AND ACTUAL FIELD CONDITIONS THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR CONTRACTORS TO OBTAIN ALL FEDERAL, STATE, COUNTY, CITY, AND LOCAL PERMITS FOR ANY AND ALL WORK REQUIRED UNLESS OTHERWISE NOTED. THE CONTRACTOR OR CONTRACTORS ARE RESPONSIBLE TO PAY FOR ALL REQUIRED PERMITS BY ANY OR ALL AGENCIES INVOLVED UNLESS OTHERWISE NOTED BY THE CONTRACTOR SPECIFICATIONS.
- DAMAGE TO EXISTING IMPROVEMENTS, EXCAVATION AND/OR REMOVAL OF EXISTING IMPROVEMENTS SHALL BE RESTORED, RECONSTRUCTED, OR REPLACED DURING CONSTRUCTION BY THE CONTRACTOR AT HIS/HER OWNERS RISK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL MUD, DIRT, GRAVEL AND LOOSE MATERIALS TRACKED, DUMPED, SPILLED OR WASHED FROM THIS SITE ONTO OTHER SITES, RIGHT-OF-WAYS, PUBLIC OR PRIVATE STREETS OR ROADS, DRIVEWAYS, YARDS OR SIDE WALKS.
- PROVIDE SMOOTH TRANSITIONS FROM NEW AREAS TO EXISTING FEATURES AS NECESSARY.
- SUBMIT SAMPLES OF MATERIALS AND FINISHES TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION AS OUTLINED IN THE SPECIFICATIONS.
- SEAL AREAS WHERE PROPOSED ASPHALT PAVEMENT MEETS THE EXISTING PAVEMENT WITH A TACK COAT MATERIAL.

### SITE STAKING AND LAYOUT NOTES:

- DO NOT SCALE DRAWINGS TO DETERMINE EXACT LAYOUT INFORMATION.
- CONTRACTOR SHALL STAKE AND VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO INITIATION OF ANY CONSTRUCTION. REVIEW ANY DISCREPANCIES IMMEDIATELY WITH THE LANDSCAPE ARCHITECT.
- DIMENSIONS IN CURBED AREAS SHALL BE TO BACK OF CURB. DIMENSIONS IN AREAS WITHOUT CURBING SHALL BE TO EDGE OF PAVEMENT.
- DIMENSIONS ARE TO FACE AND PERPENDICULAR TO BASE LINES. PROPERTY LINES OR BUILDING LINES UNLESS OTHERWISE NOTED.
- RADIUS INDICATED SHALL BE FORMED AS CIRCULAR ARCS. CURVES AND ARCS SHALL INTERSECT OTHER CURVES AND LINES AT POINTS OF TANGENCY FOR SMOOTH TRANSITIONS UNLESS CLEARLY NOTED OTHERWISE.
- ACCESSIBLE RAMPS AND SIGNAGE SHALL BE IN ACCORDANCE WITH FEDERAL CODES. SEE SITE PLANS FOR LOCATIONS AND SITE DETAILS FOR SPECIFICATIONS.
- REFER TO PLANTING PLANS FOR LAYOUT OF PLANTING BEDS, PLANTING BEDS AND THE EXTENT OF ALL SEEDING AND SEEDING.
- REFER TO SPECIFICATIONS FOR ADDITIONAL CONDITIONS, STANDARDS, AND NOTES.

### SITE GRADING AND DRAINAGE NOTES:

- VERIFY GRADES IN FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT / CIVIL ENGINEER.
- COORDINATE ALL EARTH MOVING ACTIVITIES WITH EXISTING AND NEW UTILITIES. VERIFY COVER REQUIREMENTS WITH UTILITY COMPANIES.
- IN ALL EXCAVATING CONTRACTOR OR LANDSCAPE CONTRACTOR SHALL PREPARE THE FINISH GRADE AT 3" BELOW ADJACENT AREAS. FINISHED GRADES IN PLANTING AREAS SHALL BE SET 1" LOWER THAN ADJACENT PAVING AND ARE TO INCLUDE 3" MULCH OVER PLANTING SOIL.
- PRIOR TO FINISH GRADING CONTRACTORS SHALL MAINTAIN WATER DRAINAGE RUN OFF SITE CONSISTENT WITH DRAWINGS. NO WATER SHALL BE DIVERTED ONTO ADJACENT PROPERTIES DURING ANY PART OF THE GRADING PROCESS.

### UTILITY NOTES:

- KNOWN UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF EXISTING UTILITIES AND REPAIRING ANY DAMAGE DONE TO THEM DURING PROBING OR CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR THE RELOCATION OF UTILITIES ON SITE OR CROSSING THE SITE TO SERVICE OTHER PROPERTIES. DO NOT INTERRUPT EXISTING UTILITY SERVICE SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS, EXCEPT WHEN PERMITTED.
- VERIFY CONNECTIONS TO EXISTING STORM, SANITARY, WATER, GAS, COMMUNICATION AND ELECTRIC WITH THE PROPERTYS ENGINEER AND COORDINATED WITH THE RESPECTIVE UTILITY PRIOR TO BEGINNING WORK (SEE CIVIL AND MEP DRAWINGS).
- MAINTAIN VERTICAL AND HORIZONTAL SEPARATION BETWEEN WATER MAINS AND STORM/SANITARY SEWERS AS REQUIRED BY APPROPRIATE FEDERAL, STATE OR MUNICIPAL JURISDICTIONS.
- NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY CONFLICTS BETWEEN EXISTING OR PROPOSED UTILITIES AND THE PROPOSED LANDSCAPE AND OTHER SITE IMPROVEMENTS.



LANDSCAPE ARCHITECT:



363 N Illinois Street, Suite 2  
Indianapolis, IN 46204  
P: 317.536.6161  
E: www.hitchcockdesigngroup.com

STRUCTURAL:



1717 E 116th Street, #200  
Carmel, IN 46032  
P: 317.580.0402  
E: www.mccomaseng.com

MEP:



201 S. Laurel Avenue, Suite 510  
Indianapolis, IN 46226  
TEL: 317.336.8827 FAX: 317.336.8821

IRRIGATION:



116 Shadow Lawn Drive  
Fishers, IN 46038  
P: 800.847.1911  
E: www.assupply.com

TRAFFIC:



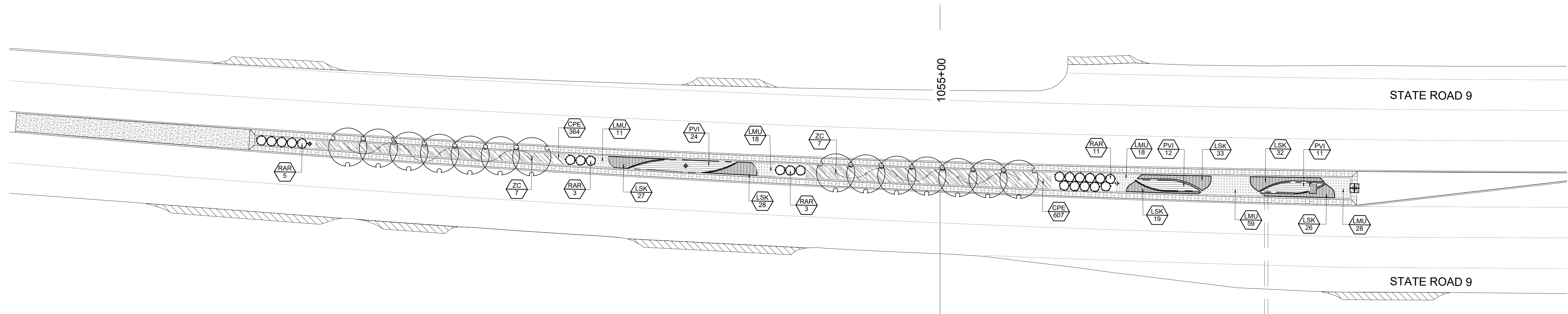
9025 River Rd, Suite 200  
Indianapolis, IN 46240  
P: 317.547.5500  
E: structurepoint.com



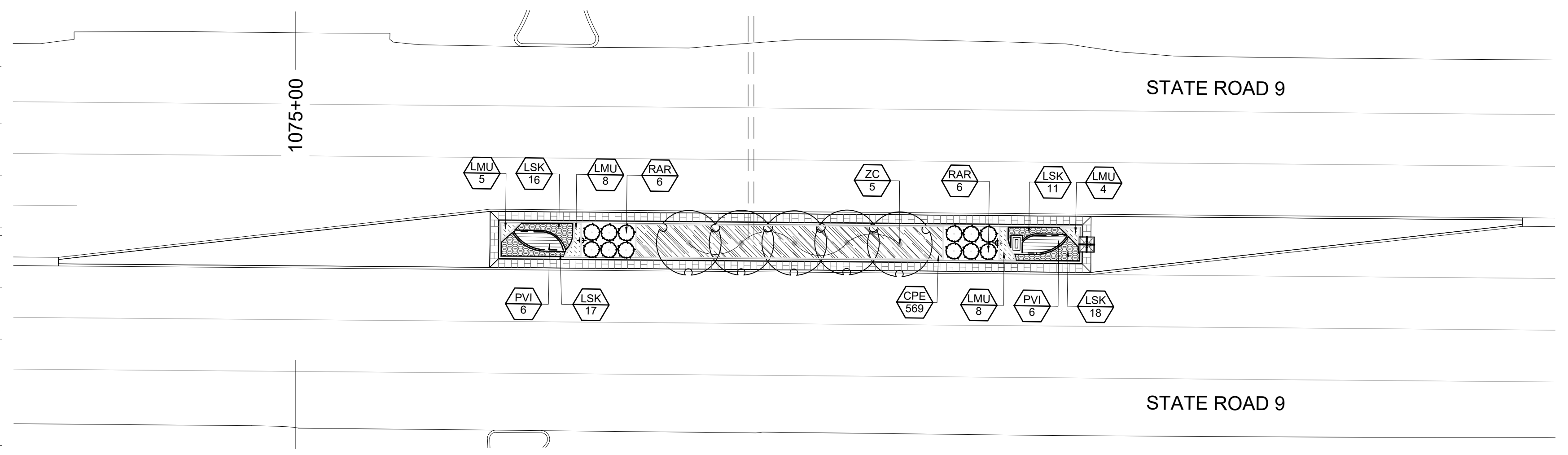
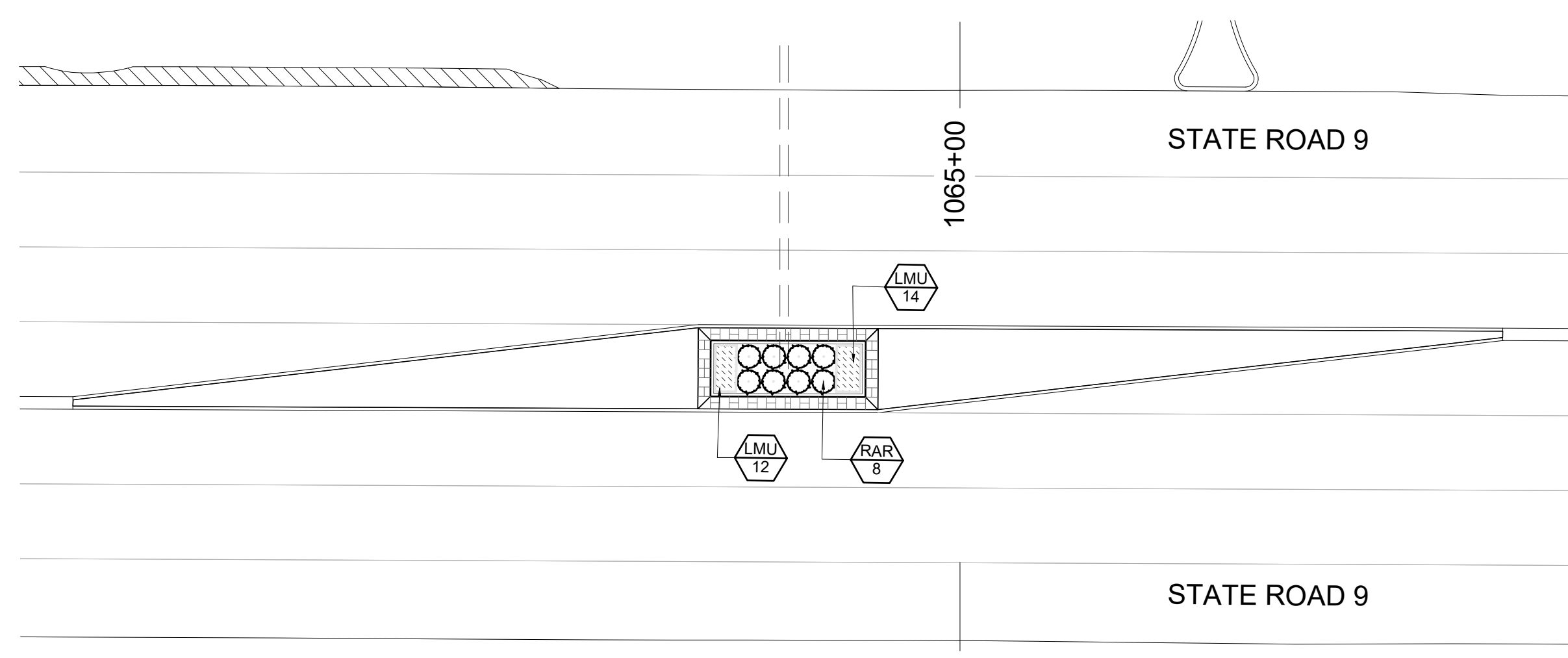
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA STATE ROAD 9 MEDIAN IMPROVEMENTS	
OVERALL PLAN	

SCALE N.T.S.	ISSUE DATE June 1, 2022
SHEET L100	REVISION



1 MEDIAN A

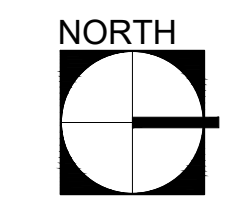
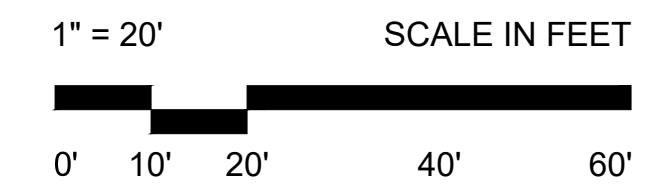


PLANT SCHEDULE BASE BID

TREES	QTY	COMMON / BOTANICAL NAME	CONTAINER	SIZE
ZC	42	City Sprite Zelkova / Zelkova serrata 'City Sprite'™	B & B	2.5" Cal.
SHRUBS	QTY	COMMON / BOTANICAL NAME	CONTAINER	HEIGHT
RAR	96	Gro-Low Fragrant Sumac / Rhus aromatica 'Gro-Low'	3 gal	18"-24"
ORNAMENTAL GRASSES	QTY	COMMON / BOTANICAL NAME	CONT	
PVI	105	Blue Switch Grass / Panicum virgatum 'Heavy Metal'	1 gal	30" o.c.
PERENNIALS	QTY	COMMON / BOTANICAL NAME	CONT	
LSK	565	Spike Gayfeather / Liatris spicata 'Kobold'	1 gal	18" o.c.
GROUND COVERS	QTY	COMMON / BOTANICAL NAME	CONTAINER	
CPE	4,503	Pennsylvania Sedge / Carex pensylvanica	4" pot	12" o.c.
LMU	479	Lilyturf / Liriope muscari	1 gal.	18" o.c.

PLANTING NOTES

- Seed/Sod limit line is approximate. Seed/Sod to limits of grading and disturbance. Contractor responsible for restoration of any unauthorized disruption outside of designated construction area.
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- Bedlines are to be spade cut to a minimum depth of 3 inches unless otherwise shown on the plans. Curved bedlines are to be smooth and not segmented.
- Do not locate plants within 10' of utility structures, or within 5' horizontally of underground utility lines unless otherwise shown on the plans. Consult with Landscape Architect if these conditions exist.
- Plants and other materials are quantified and summarized for the convenience of the Owner and jurisdictional agencies only. Confirm and install sufficient quantities to complete the work as drawn and specified. No additional payments will be made for materials required to complete the work as drawn and specified.
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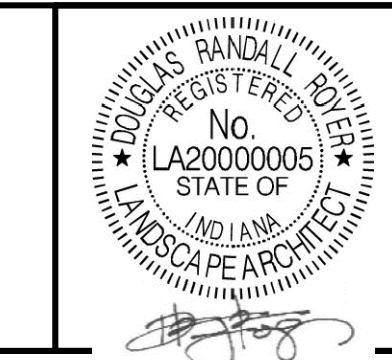
LANDSCAPE ARCHITECT:  
**HITCHCOCK DESIGN GROUP**  
 creating better places  
 363 N Illinois Street, Suite 2  
 Indianapolis, IN 46204  
 P: 317.536.6161  
 E: www.hitchcockdesigngroup.com

STRUCTURAL:  
**MCCOMAS/ O'DONNELL & NACCARATO**  
 STRUCTURAL ENGINEERS  
 1717 E 116th Street, #200  
 Carmel, IN 46032  
 P: 317.580.0402  
 E: www.mccomaseng.com

MEP:  
**LOFTUS ENGINEERING, Inc.**  
 201 S Capitol Avenue • Suite 310  
 INDIANAPOLIS, IN 46225  
 TEL (317) 352-5822 • FAX (317) 352-5821

IRRIGATION:  
**AUTOMATIC SUPPLY**  
 116 Shadow Lawn Drive  
 Fishers, IN 46038  
 P: 800.842.3911  
 E: www.askautomatic.com

TRAFFIC:  
**AMERICAN STRUCTUREPOINT**  
 INC.  
 9025 River Rd, Suite 200  
 Indianapolis, IN 46240  
 P: 317.547.5580  
 E: structurepoint.com

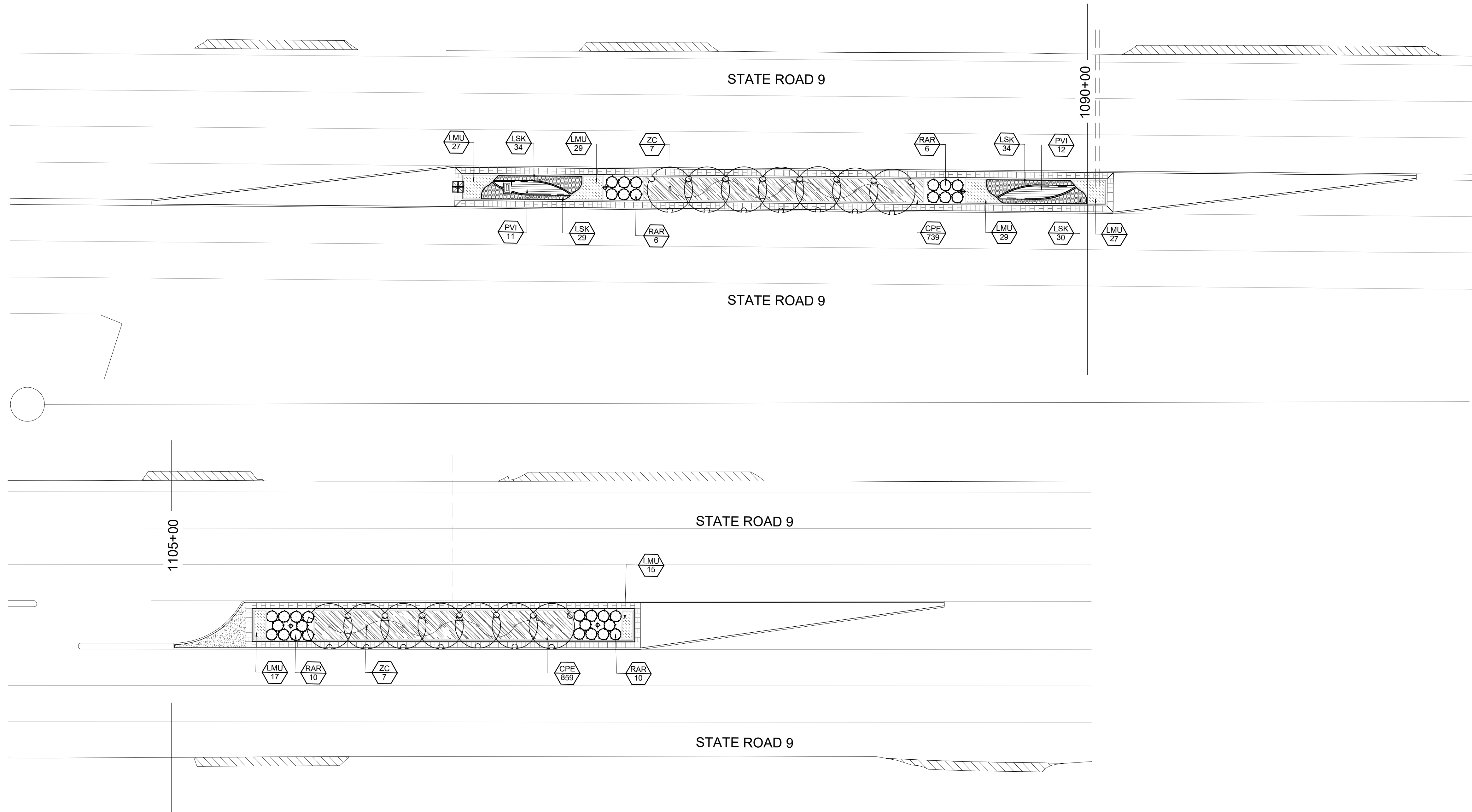


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA  
 STATE ROAD 9 MEDIAN IMPROVEMENTS  
 PLANTING PLAN

SCALE	ISSUE DATE
SCALE: 1" = 20'	June 1, 2022
SHEET	REVISION
L200	



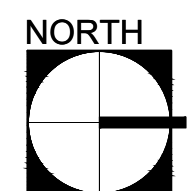
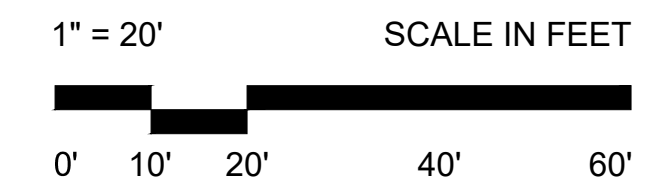


**PLANT SCHEDULE BASE BID**

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SHRUBS	QTY	COMMON / BOTANICAL NAME	CONTAINER	HEIGHT
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ORNAMENTAL GRASSES	QTY	COMMON / BOTANICAL NAME	CONT	
PVI	105	Blue Switch Grass / Panicum virgatum 'Heavy Metal'	1 gal	30" o.c.
PERENNIALS	QTY	COMMON / BOTANICAL NAME	CONT	
LSK	565	Spike Gayfeather / Liatris spicata 'Kobold'	1 gal	18" o.c.
GROUND COVERS	QTY	COMMON / BOTANICAL NAME	CONTAINER	
CPE	4,503	Pennsylvania Sedge / Carex pensylvanica	4" pot	12" o.c.
LMU	479	Lilyturf / Liriope muscari	1 gal.	18" o.c.

**PLANTING NOTES**

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MEP:  
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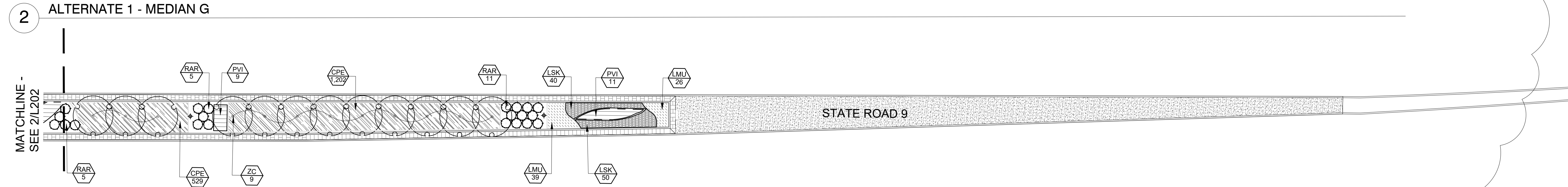
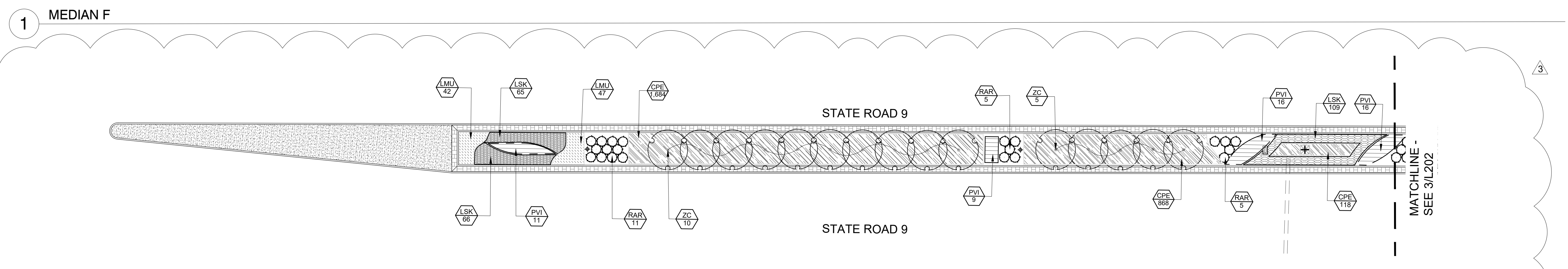
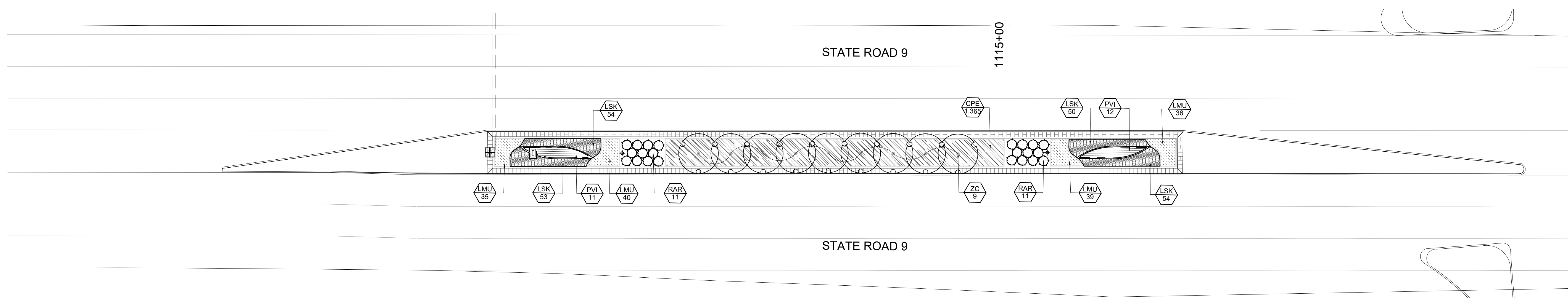
TRAFFIC:  
**AMERICAN STRUCTUREPOINT INC.**  
 9025 River Rd, Suite 200  
 Indianapolis, IN 46240  
 P: 317.547.5580  
 E: structurepoint.com



RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA  
 STATE ROAD 9 MEDIAN IMPROVEMENTS  
 PLANTING PLAN

SCALE	ISSUE DATE
SCALE: 1" = 20'	June 1, 2022
SHEET	REVISION
L201	



PLANT SCHEDULE BASE BID

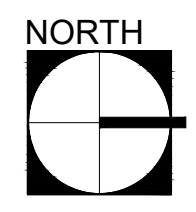
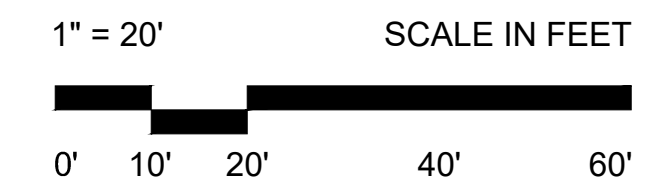
TREES	QTY	COMMON / BOTANICAL NAME	CONTAINER	SIZE
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SHRUBS	QTY	COMMON / BOTANICAL NAME	CONTAINER	HEIGHT
RAR	96	Gro-Low Fragrant Sumac / Rhus aromatica 'Gro-Low'	3 gal	18"-24"
ORNAMENTAL GRASSES	QTY	COMMON / BOTANICAL NAME	CONT	
PVI	105	Blue Switch Grass / Panicum virgatum 'Heavy Metal'	1 gal	30" o.c.
PERENNIALS	QTY	COMMON / BOTANICAL NAME	CONT	
LSK	565	Spike Gayfeather / Liatris spicata 'Kobold'	1 gal	18" o.c.
GROUND COVERS	QTY	COMMON / BOTANICAL NAME	CONTAINER	
CPE	4,503	Pennsylvania Sedge / Carex pensylvanica	4" pot	12" o.c.
LMU	479	Lilyturf / Liriope muscari	1 gal.	18" o.c.

PLANT SCHEDULE ALTERNATE 1

TREES	QTY	COMMON / BOTANICAL NAME	CONTAINER	SIZE
ZC	27	City Sprite Zelkova / Zelkova serrata 'City Sprite'™	B & B	2.5" Cal.
SHRUBS	QTY	COMMON / BOTANICAL NAME	CONTAINER	HEIGHT
RAR	42	Gro-Low Fragrant Sumac / Rhus aromatica 'Gro-Low'	3 gal	18"-24"
ORNAMENTAL GRASSES	QTY	COMMON / BOTANICAL NAME	CONT	
PVI	72	Blue Switch Grass / Panicum virgatum 'Heavy Metal'	1 gal	30" o.c.
PERENNIALS	QTY	COMMON / BOTANICAL NAME	CONT	
LSK	331	Spike Gayfeather / Liatris spicata 'Kobold'	1 gal	18" o.c.
GROUND COVERS	QTY	COMMON / BOTANICAL NAME	CONTAINER	
CPE	4,401	Pennsylvania Sedge / Carex pensylvanica	4" pot	12" o.c.
LMU	154	Lilyturf / Liriope muscari	1 gal.	18" o.c.

PLANTING NOTES

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LANDSCAPE ARCHITECT:  
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 creating better places  
 363 N Illinois Street, Suite 2  
 Indianapolis, IN 46204  
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 E: www.hitchcockdesigngroup.com

STRUCTURAL:  
**MCCOMAS/ODONNELL & NACCARATO**  
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 1717 E 116th Street, #200  
 Carmel, IN 46032  
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 E: www.mccomaseng.com

MEP:  
**LOFTUS ENGINEERING, Inc.**  
 201 S Capitol Avenue • Suite 310  
 INDIANAPOLIS, IN 46225  
 TEL (317) 352-5822 • FAX (317) 352-5821

IRRIGATION:  
**AUTOMATIC SUPPLY**  
 116 Shadow Lawn Drive  
 Fishers, IN 46038  
 P: 800.842.3911  
 E: www.askautomatic.com

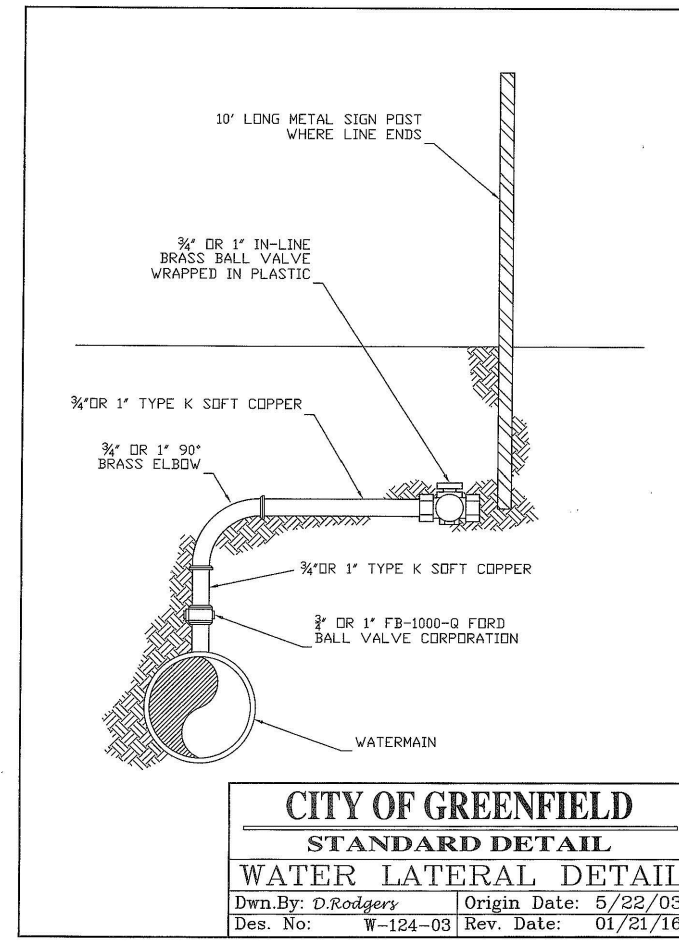
TRAFFIC:  
**AMERICAN STRUCTUREPOINT**  
 INC.  
 9025 River Rd, Suite 200  
 Indianapolis, IN 46240  
 P: 317.547.5580  
 E: structurepoint.com



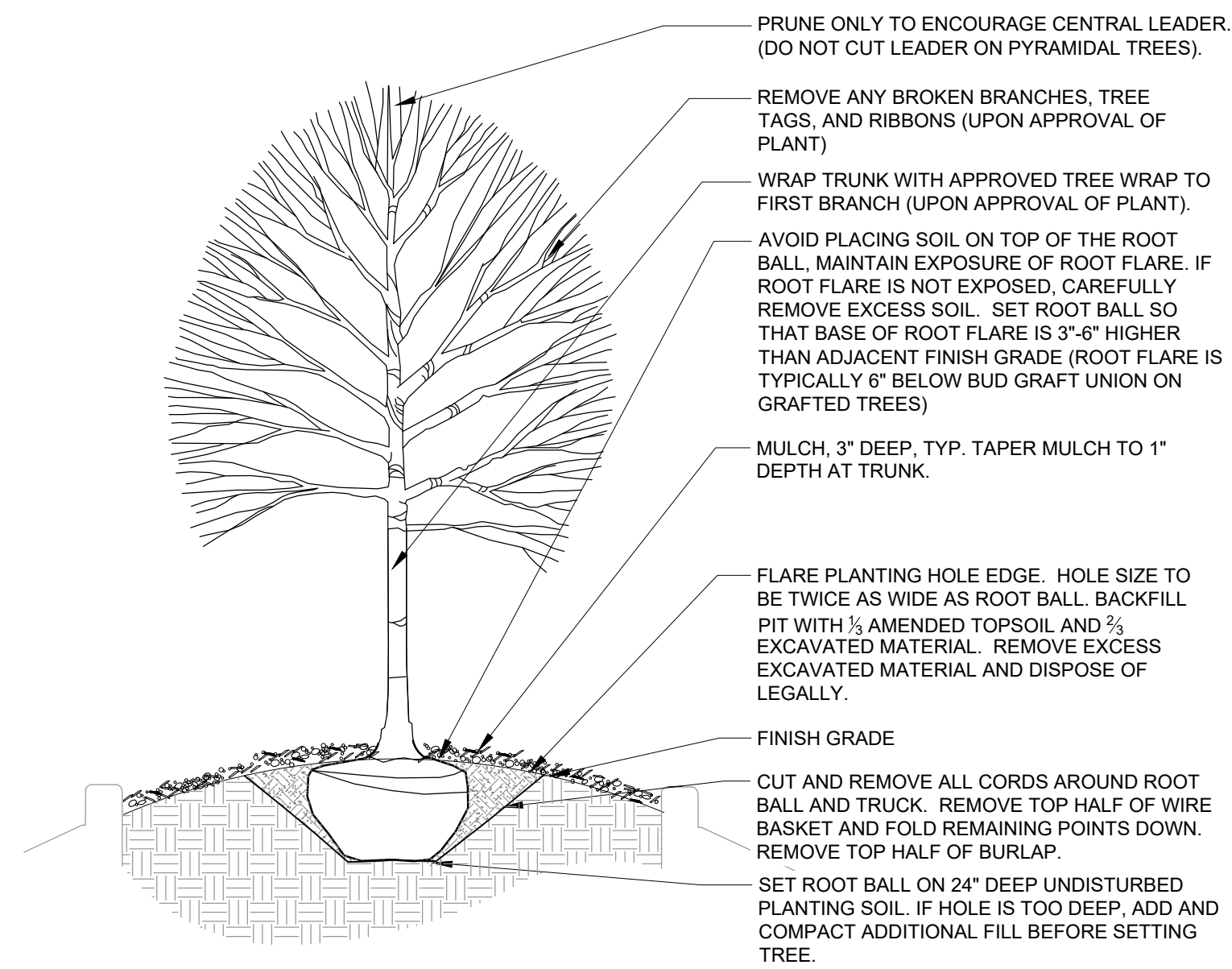
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA  
 STATE ROAD 9 MEDIAN IMPROVEMENTS  
 PLANTING PLAN

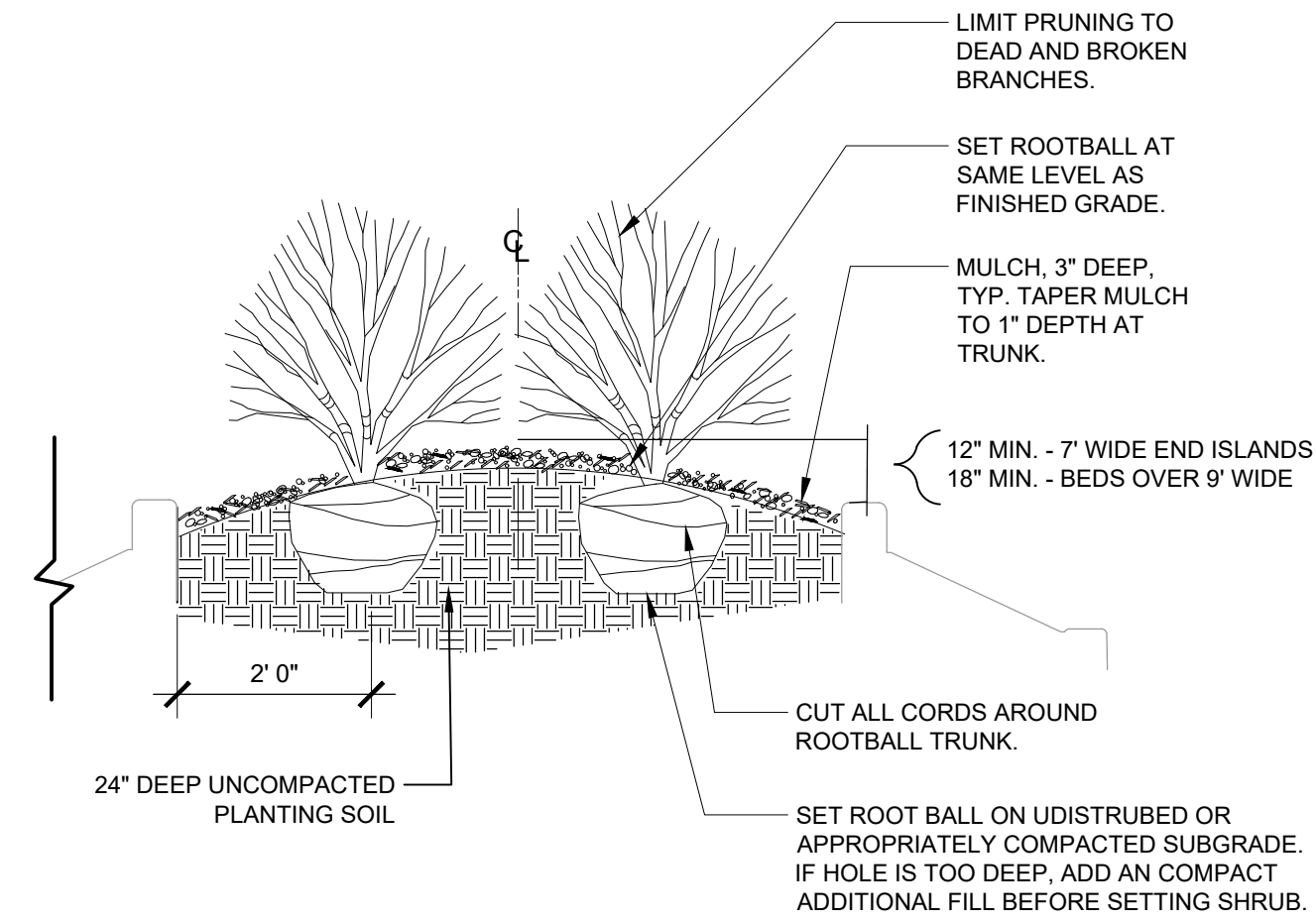
SCALE	ISSUE DATE
SCALE: 1" = 20'	June 1, 2022
SHEET	REVISION
L202	3 RFI02 6/24/2022



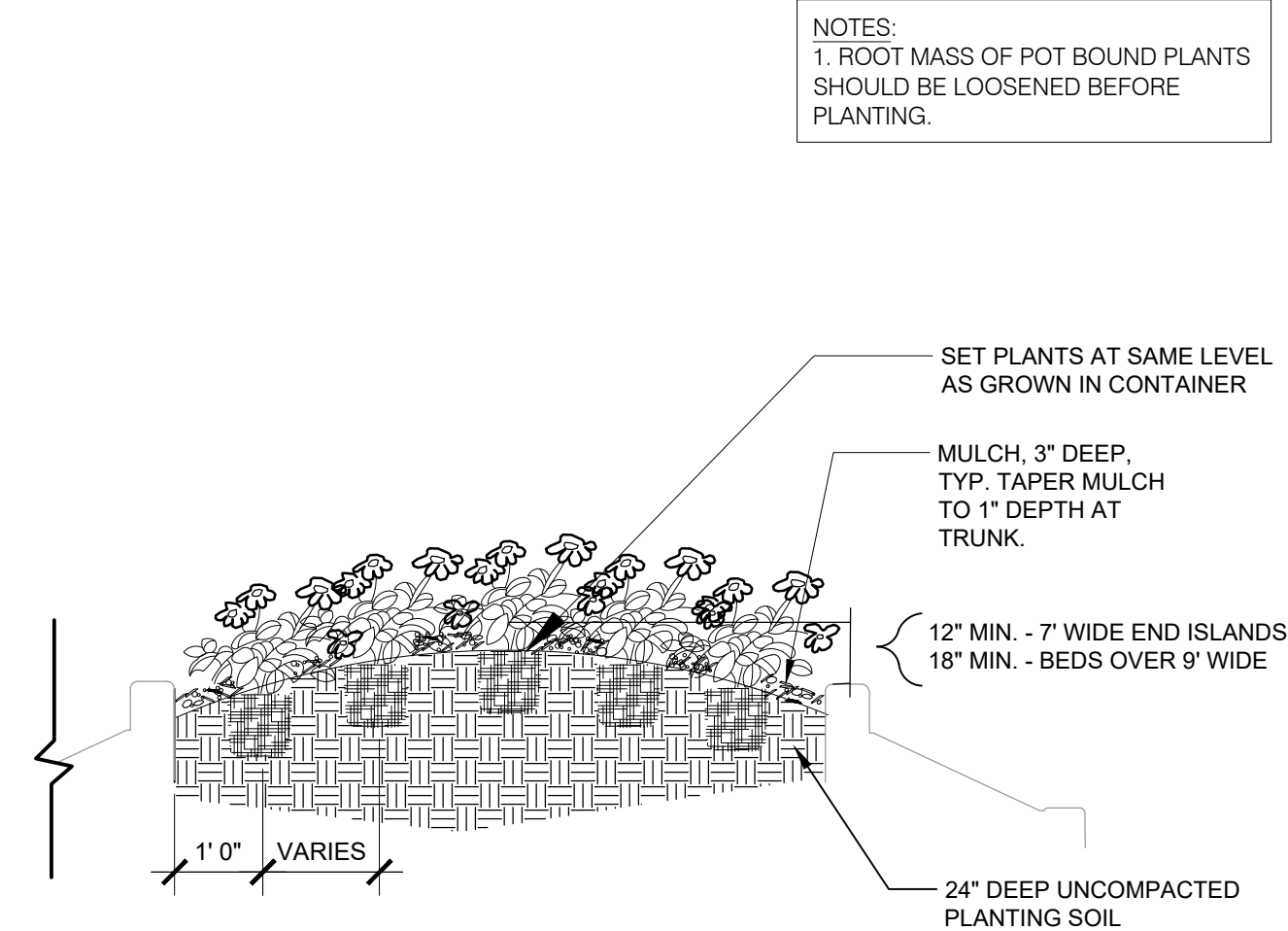
**5 WATER MAIN TAP**  
6" = 1'-0"



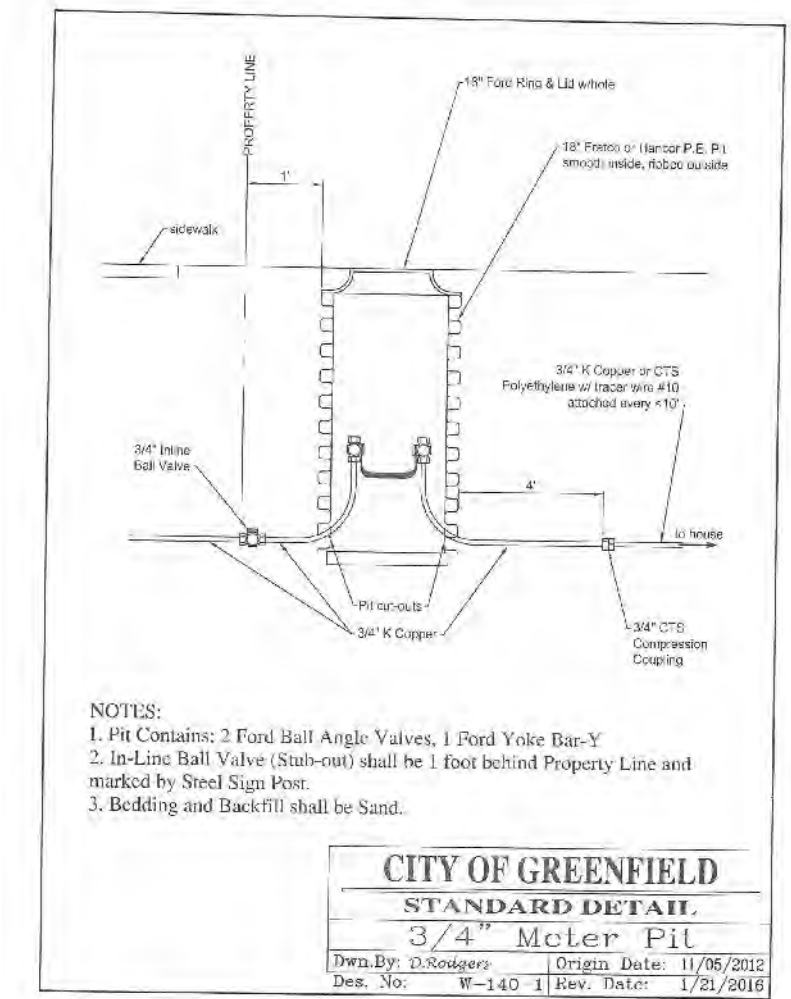
**1 TREE PLANTING IN ISLAND**  
1/2" = 1'-0"



**2 SHRUB PLANTING IN ISLAND**  
1/2" = 1'-0"



**3 ANNUAL PLANTING IN ISLAND**  
1/2" = 1'-0"



**4 WATER METER PIT**  
6" = 1'-0"

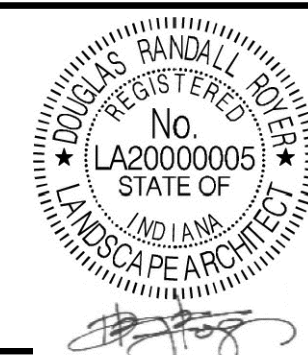
LANDSCAPE ARCHITECT:  
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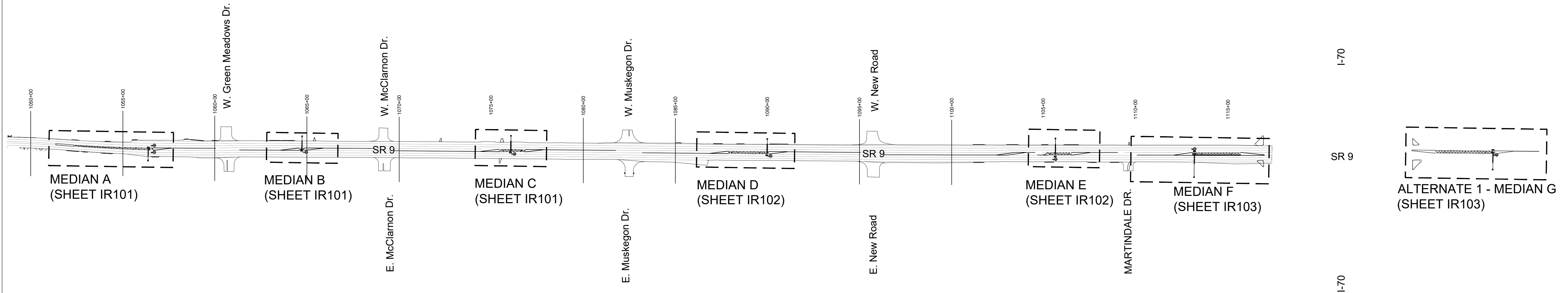


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA  
STATE ROAD 9 MEDIAN IMPROVEMENTS

PLANTING DETAILS

SCALE	ISSUE DATE
SCALE: AS NOTED	June 1, 2022
SHEET	REVISION
L203	



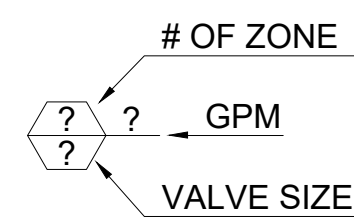
**LEGEND**

DESCRIPTION	APPROVED MANUFACTURERS	
Multi-Stream Shrub Rotor	Rain Bird 1812-SAM P45 Rotator-PC**	Hunter PROS-12-PRS40-CV Rotator PC**
Multi-Stream Shrub Rotor	Rain Bird 1812-SAM P45 Rotator-EST/SST**	Hunter PROS-12-PRS40-CV Rotator LCS/RCS/SS**
Remote Control Valves	Rain Bird 100 PGA Series	Hunter PGV 101G Series
Controller	Rain Bird TBOS-BT	Hunter Node-BT
Rain Sensor	Rain Bird RSDBEX	Hunter Rain-Click-RFC
Backflow Preventer	Wilkins 720A 1" PVB	
Meter	1" Meter (Refer to Water Meter Pit Detail on 4/L203 and Water Main Tap on 5/L203)	

- 1" 200 PSI SDR 21 PVC Lateral Pipe
- 1" 200 PSI SDR 21 PVC Mainline Pipe w/ Trace wire



116 SHADOWLAWN DRIVE  
FISHERS, IN 46038  
(317) 585-0167  
www.irrigationdesignsource.com



AUTOMATIC SUPPLY  
MEMBER  
S P R I N G C O M P A N Y  
116 SHADOWLAWN DRIVE FISHERS, IN 46038  
317/842-3123 800/842-3911 Fax 317/846-0977  
www.askautomatic.com

\*\* Multi-Stream Rotors (12"-28") provide appropriate nozzle selection and adjustment to provide 100% coverage as they exist on site.

**GENERAL IRRIGATION NOTES:**

- Clock (Node-BT or RSDBEX) to be installed inside of the valve box, with rain sensor mounted on a post in vicinity of clock in each median bed. Backflow will be also be installed inside the median.
- This irrigation design is diagrammatic. Actual layout of piping, sprinkler heads, valves, controllers and related equipment shall be determined on site. Minor field adjustments shall be made at no additional cost to the Owner.
- It is the responsibility of the irrigation contractor to be familiar with all grades difference, locations of walls, structures and utilities and make the necessary adjustments to accommodate the irrigation system as designed. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that unknown obstructions, grades or dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the

Owner's authorized representative. In the event that this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions and cost necessary.

- The irrigation system design is based on running irrigation zones at a minimum operating pressure of 60psi @ the meter and a maximum flow demand of 16gpm. The irrigation contractor shall verify water pressures prior to construction. Report differences between requirements and actual readings to the Owner's authorized representative. A booster pump may be necessary if the required pressure is not available. Additional costs shall be submitted to the Owner as a change order. The point of connection location is approximate. Verify exact location in the field with the Owner's representative. The flow demand for individual mainlines shall not exceed the following guidelines.  
1" Class 200=0-17gpm

- 2" Class 200=36-55gpm
- A Rain Sensor shall be installed in the vicinity of the controller. Coordinate mounting location with the Owner.
- Install all backflow prevention devices and all piping between the point of connection and the backflow preventer as per local codes.
- Final location of the backflow preventer and the automatic controller shall be approved by the Owner's representative per local codes.
- A quick coupling valve shall be located at the irrigation water supply point of connection to provide for a point of injection of compressed air to purge the system of retained water for winterization.
- Pipe size shall conform to those shown on drawings. No substitutions of smaller pipe sizes shall be permitted, but substitutions for larger sizes may be approved. Minimum pipe shall be 1".
- All pipe and communication wire under hard surfaces shall be placed in separate sleeving. All wire shall run, whenever possible with the

- All lateral zones shall be connected to the mainline with PVC pipe and sized as follows:  
1" Class 200=0-17gpm  
1.25" Class 160=18-28gpm
- All sprinkler heads shall be set perpendicular and flush to finish grade and with a clearance of 2" (min.) from the edge of any hardscape unless otherwise specified.
- All sprinkler heads and valves shall be flushed and adjusted for optimum coverage with minimum over spray on hardscapes or buildings.
- All irrigation equipment not otherwise detailed or specified shall be installed as per manufacturer's recommendations and specifications.
- Refer to the specifications for additional detailed information.

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**JAMES R. HELD**  
Certified Irrigation Designer  
**CID**  
Irrigation Association  
01288A  
Jim Held

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

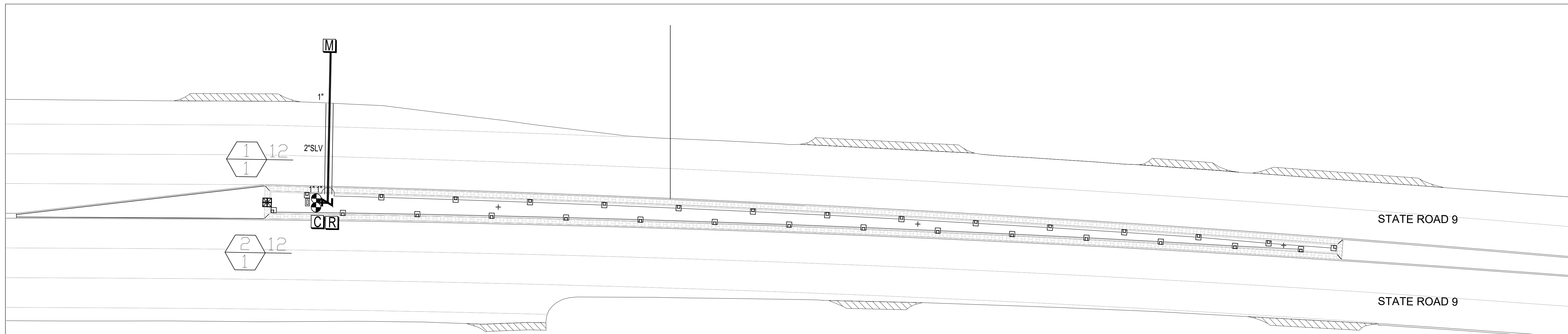
GREENFIELD, INDIANA  
STATE ROAD 9 MEDIAN IMPROVEMENTS

OVERALL IRRIGATION PLAN

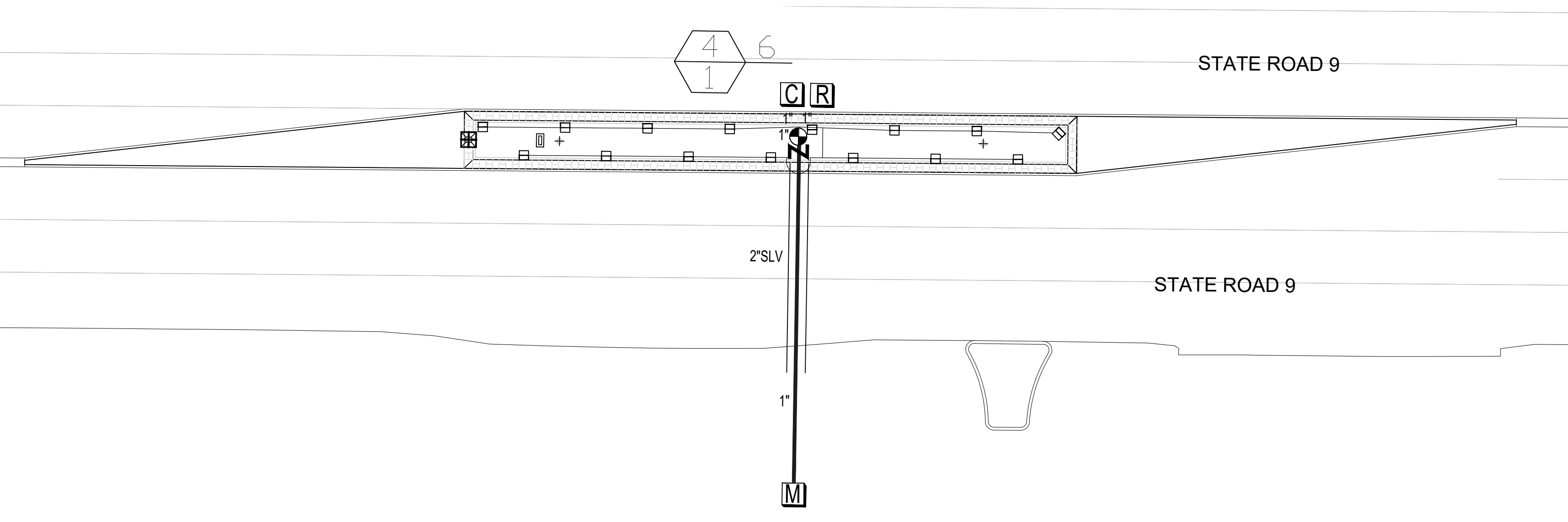
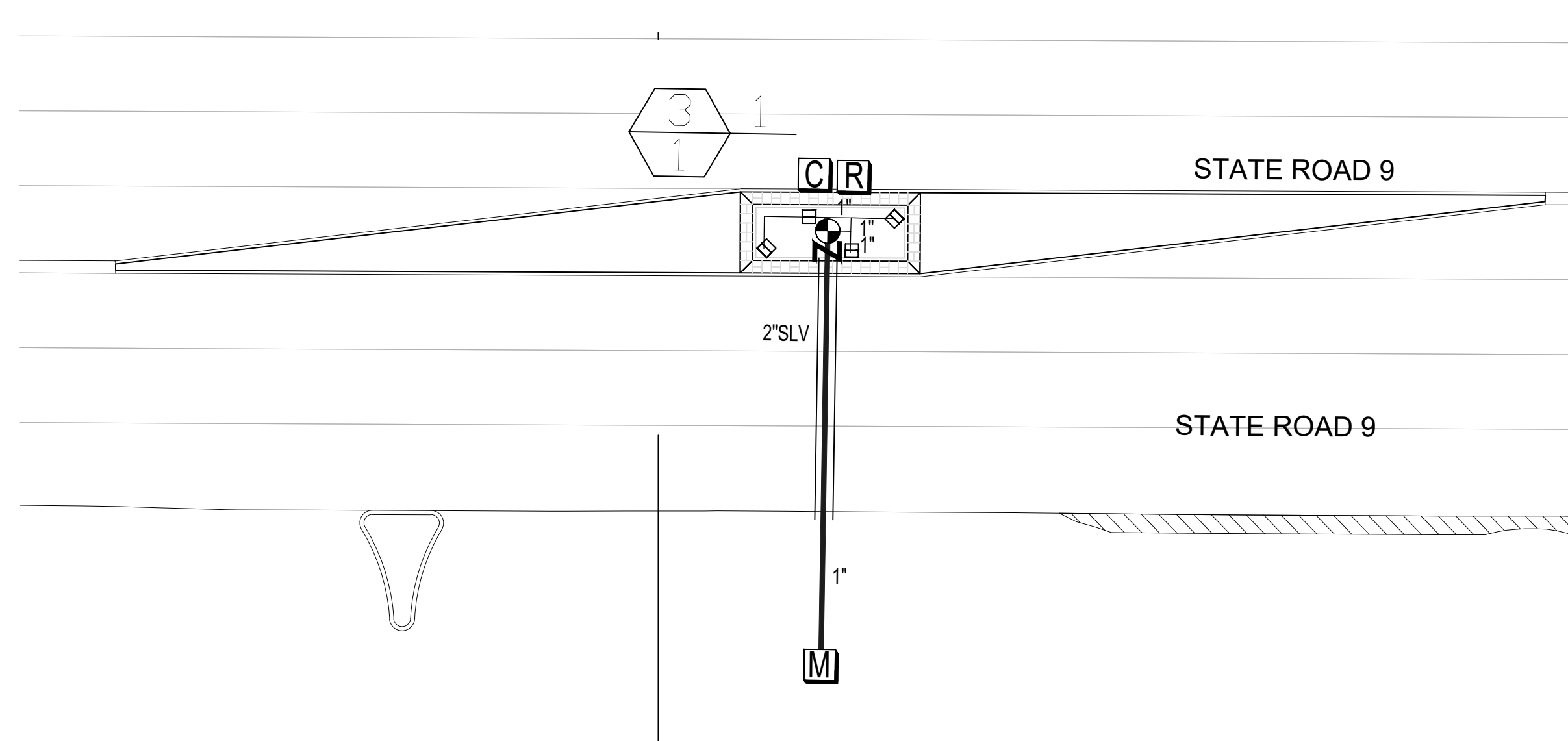
NORTH

**Indiana 811**  
Know what's below.  
Call before you dig.

SCALE NTS	ISSUE DATE June 1, 2022
SHEET IR100	REVISION



**1 MEDIAN A**



**2 MEDIAN B**

DESCRIPTION	APPROVED MANUFACTURERS
Multi-Stream Shrub Rotor	Rain Bird 1812-SAM P45 Rotator-PC** Hunter PROS-12-PRS40-CV Rotator PC**
Multi-Stream Shrub Rotor	Rain Bird 1812-SAM P45 Rotator-EST/SS1** Hunter PROS-12-PRS40-CV Rotator LCS/RCS/SS**
Remote Control Valves	Rain Bird 100 PGA Series Hunter PGV 101G Series
Controller	Rain Bird T80S-BT Hunter Node-BT
Rain Sensor	Rain Bird RSD6EX Hunter Rain-Click-RFC
Backflow Preventer	Wilkins 720A 1" PVB
Meter	1" Meter (Refer to Water Meter Pit Detail on 4/L203 and Water Main Tap on 5/L203)

1" 200 PSI SDR 21 PVC Lateral Pipe	1" 200 PSI SDR 21 PVC Mainline Pipe w/ Trace wire
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\*\* Multi-Stream Rotors (12"-28") provide appropriate nozzle selection and adjustment to provide 100% coverage as they exist on site.

**GENERAL IRRIGATION NOTES:**

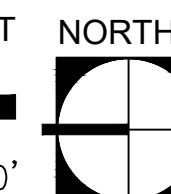
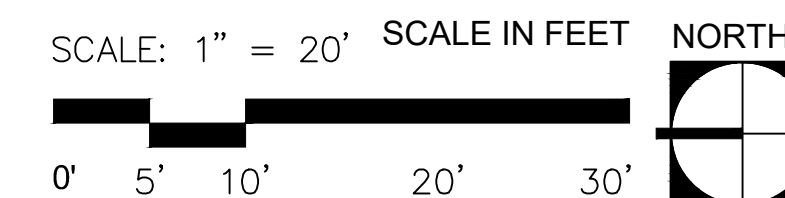
- Clock (Node-BT or RSD6EX) to be installed inside of the valve box, with rain sensor mounted on a post in vicinity of clock in each median bed. Backflow will be also be installed inside the median.
- This irrigation design is diagrammatic. Actual layout of piping, sprinkler heads, valves, controllers and related equipment shall be determined on site. Minor field adjustments shall be made at no additional cost to the Owner.
- It is the responsibility of the irrigation contractor to be familiar with all grades difference, locations of walls, structures and utilities and make the necessary adjustments to accommodate the irrigation system as designed. Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that unknown obstructions, grades or dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the

Owner's authorized representative. In the event that this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions and cost necessary.

- The irrigation system design is based on running irrigation zones at a minimum operating pressure of 60psi @ the meter and a maximum flow demand of 16gpm. The irrigation contractor shall verify water pressures prior to construction. Report differences between requirements and actual readings to the Owner's authorized representative. A booster pump may be necessary if the required pressure is not available. Additional costs shall be submitted to the Owner as a change order. The point of connection location is approximate. Verify exact location in the field with the Owner's representative. The flow demand for individual mainlines shall not exceed the following guidelines.
  - 1" Class 200=0-17gpm

- 2" Class 200=36-55gpm
- A Rain Sensor shall be installed in the vicinity of the controller. Coordinate mounting location with the Owner.
- Install all backflow prevention devices and all piping between the point of connection and the backflow preventer as per local codes.
- Final location of the backflow preventer and the automatic controller shall be approved by the Owner's representative per local codes.
- A quick coupling valve shall be located at the irrigation water supply point of connection to provide for a point of injection of compressed air to purge the system of retained water for winterization.
- Pipe size shall conform to those shown on drawings. No substitutions of smaller pipe sizes shall be permitted, but substitutions for larger sizes may be approved. Minimum pipe shall be 1".
- All pipe and communication wire under hard surfaces shall be placed in separate sleeving. All wire shall run, whenever possible with the

- mainline.
- All lateral zones shall be connected to the mainline with PVC pipe and sized as follows:
  - 1" Class 200=0-17gpm
  - 1.25" Class 160=18-28gpm
- All sprinkler heads shall be set perpendicular and flush to finish grade and with a clearance of 2" (min.) from the edge of any hardscape unless otherwise specified.
- All sprinkler heads and valves shall be flushed and adjusted for optimum coverage with minimum over spray on hardscapes or buildings.
- All irrigation equipment not otherwise detailed or specified shall be installed as per manufacturer's recommendations and specifications.
- Refer to the specifications for additional detailed information.



LANDSCAPE ARCHITECT:  
**HITCHCOCK DESIGN GROUP**  
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 363 N Illinois Street, Suite 2  
 Indianapolis, IN 46204  
 P: 317.536.6161  
 E: www.hitchcockdesigngroup.com

STRUCTURAL:  
**MCCOMAS/ O'DONNELL & NACCARATO**  
 STRUCTURAL ENGINEERS  
 1717 E 116th Street, #200  
 Carmel, IN 46032  
 P: 317.580.0402  
 E: www.mccomaseng.com

MEP:  
**LOFTUS ENGINEERING, Inc.**  
 201 S Capitol Avenue • Suite 310  
 INDIANAPOLIS, IN 46225  
 TEL (317) 352-5822 • FAX (317) 352-5821

IRRIGATION:  
**AUTOMATIC SUPPLY**  
 116 Shadow Lawn Drive  
 Fishers, IN 46038  
 P: 800.842.3911  
 E: www.askautomatic.com

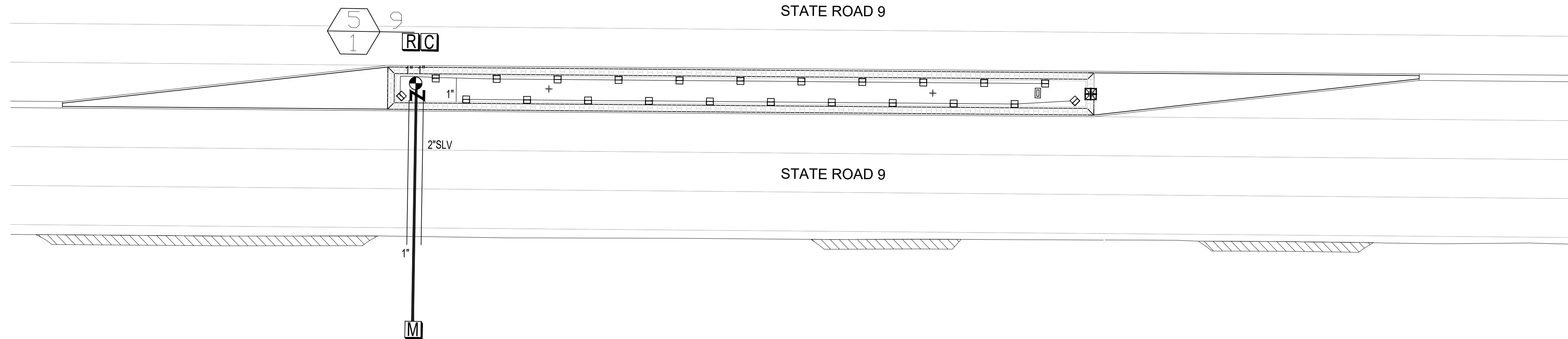
TRAFFIC:  
**AMERICAN STRUCTUREPOINT**  
 INC.  
 9025 River Rd, Suite 200  
 Indianapolis, IN 46240  
 P: 317.547.5580  
 E: structurepoint.com

**JAMES R. HEID**  
 Certified Irrigation Designer  
**CID**  
 IRRIGATION ASSOCIATION  
 012084  
*Jim Heid*

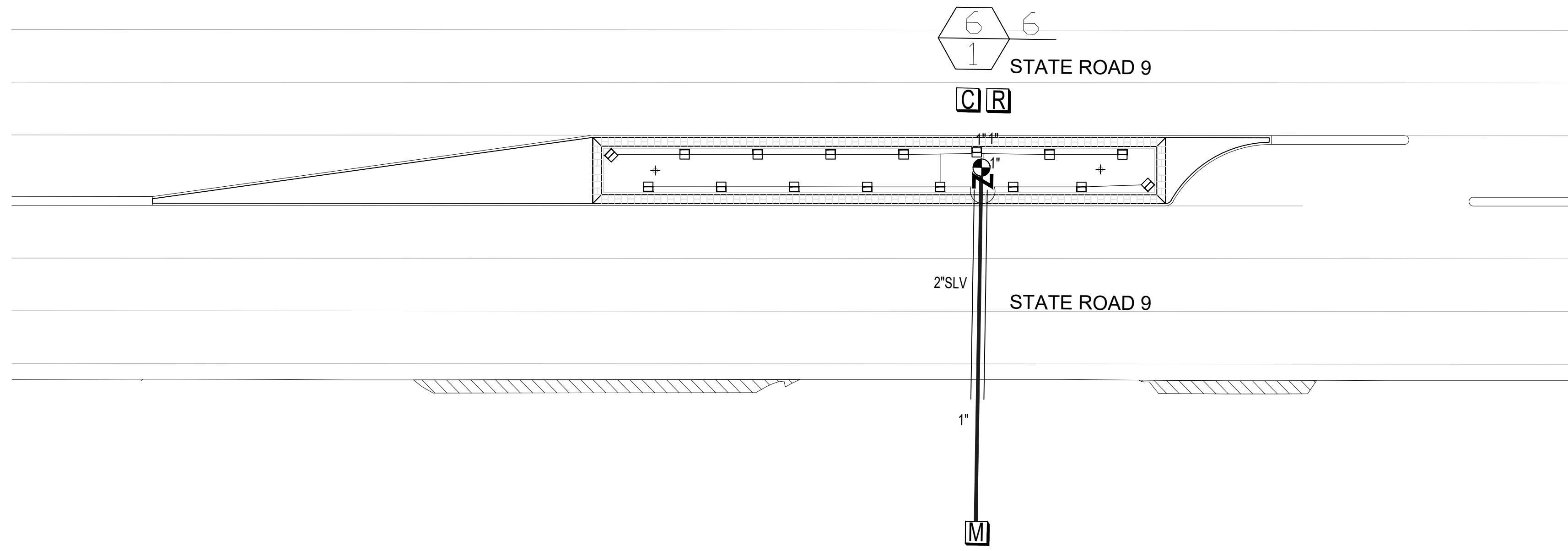
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA  
 STATE ROAD 9 MEDIAN IMPROVEMENTS  
 IRRIGATION PLAN

SCALE	ISSUE DATE
SCALE: 1" = 20'	June 1, 2022
SHEET	REVISION
IR101	



1 MEDIAN D



2 MEDIAN E

DESCRIPTION	APPROVED MANUFACTURERS
Multi-Stream Shrub Rotator	Rain Bird 1812-SAM P45 Rotator-PC** Hunter PROS-12-PRS40-CV Rotator PC**
Multi-Stream Shrub Rotator	Rain Bird 1812-SAM P45 Rotator-EST/SS** Hunter PROS-12-PRS40-CV Rotator LCS/RCS/SS**
Remote Control Valves	Rain Bird 100 PGA Series Hunter PGV 101G Series
Controller	Rain Bird TBOS-BT Hunter Node-BT
Rain Sensor	Rain Bird RSDBEX Hunter Rain-Click-RFC
Backflow Preventer	Wilkins 720A 1" PVB
Meter	1" Meter (Refer to Water Meter Pit Detail on 4/L203 and Water Main Tap on 5/L203)

1" 200 PSI SDR 21 PVC Lateral Pipe
1" 200 PSI SDR 21 PVC Mainline Pipe w/ Trace wire

VALVE SIZE	# OF ZONE	GPM
1/2"	7	7

**IRRIGATION DESIGN SOURCE**  
118 SHADOW LAWN DRIVE  
FISHERS, IN 46038  
(317) 585-0167  
www.irrigationdesignsource.com

**AUTOMATIC SUPPLY**  
118 SHADOW LAWN DRIVE, FISHERS, IN 46038  
317-943-3133 800-943-3811 Fax 317-943-3817  
www.askautomatic.com

**GENERAL IRRIGATION NOTES:**

- Clock (Node-BT or RSDBEX) to be installed inside of the valve box, with rain sensor mounted on a post in vicinity of clock in each median bed. Backflow will be also be installed inside the median.
- This irrigation design is diagrammatic. Actual layout of piping, sprinkler heads, valves, controllers and related equipment shall be determined on site. Minor field adjustments shall be made at no additional cost to the Owner.
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  - 2" Class 200=36-55gpm
- A Rain Sensor shall be installed in the vicinity of the controller. Coordinate mounting location with the Owner.
- Install all backflow prevention devices and all piping between the point of connection and the backflow preventer as per local codes.
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- All pipe and communication wire under hard surfaces shall be placed in separate sleeving. All wire shall run, whenever possible with the mainline.
- All lateral zones shall be connected to the mainline with PVC pipe and sized as follows:
  - 1" Class 200=0-17gpm
  - 1.25" Class 160=18-28gpm
- All sprinkler heads shall be set perpendicular and flush to finish grade and with a clearance of 2" (min.) from the edge of any hardscape unless otherwise specified.
- All sprinkler heads and valves shall be flushed and adjusted for optimum coverage with minimum over spray on hardscapes or buildings.
- All irrigation equipment not otherwise detailed or specified shall be installed as per manufacturer's recommendations and specifications.
- Refer to the specifications for additional detailed information.

SCALE: 1" = 20' SCALE IN FEET NORTH

LANDSCAPE ARCHITECT:  
**HITCHCOCK DESIGN GROUP**  
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IRRIGATION:  
**AUTOMATIC SUPPLY**  
116 Shadow Lawn Drive  
Fishers, IN 46038  
P: 800.842.3911  
E: www.askautomatic.com

TRAFFIC:  
**AMERICAN STRUCTUREPOINT INC.**  
9025 River Rd, Suite 200  
Indianapolis, IN 46240  
P: 317.547.5580  
E: structurepoint.com

**JAMES R. HEID**  
Professional Irrigation Designer  
**CID**  
01298A  
Jim Heid

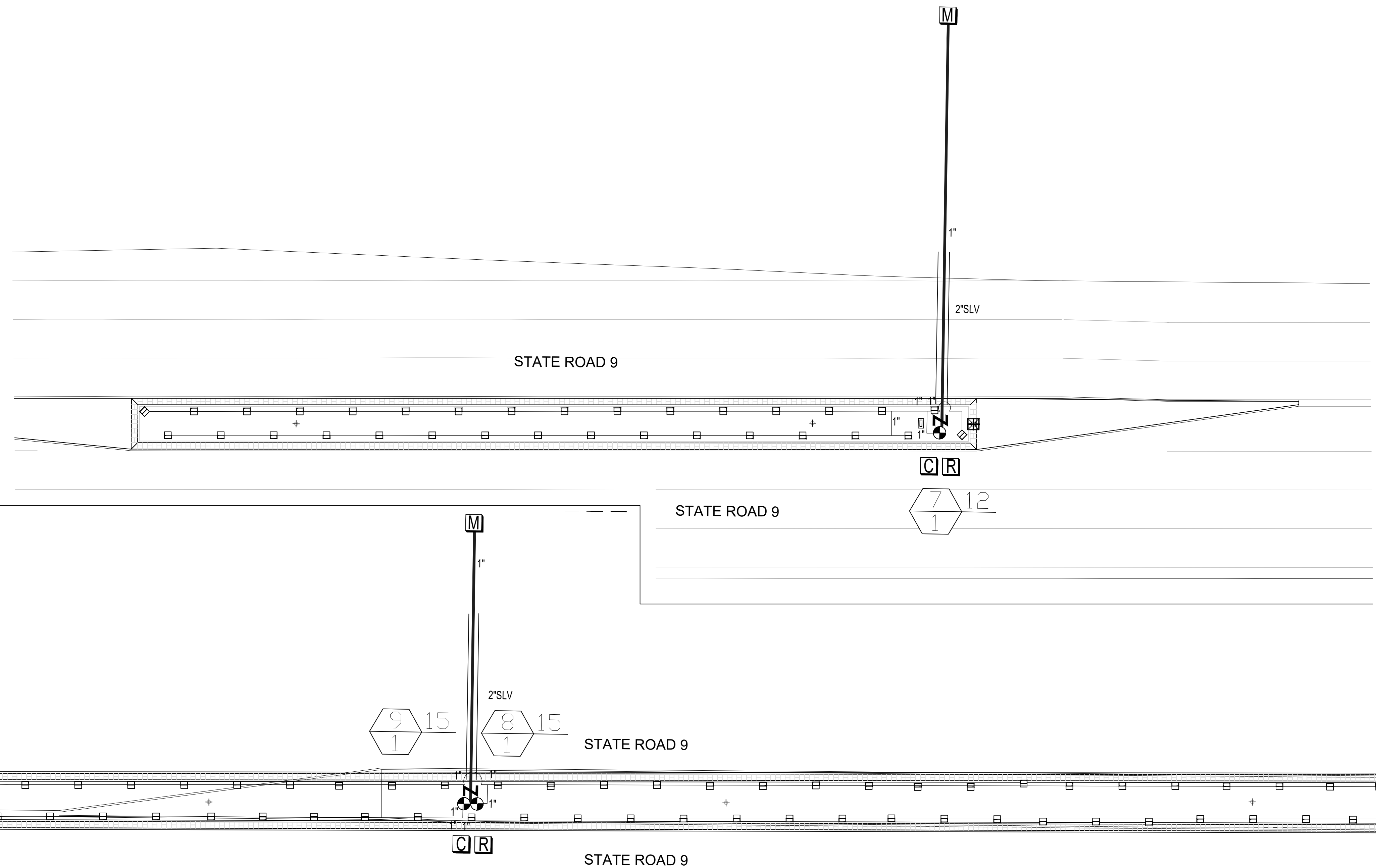
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: SC	DRAWN: SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA  
STATE ROAD 9 MEDIAN IMPROVEMENTS

IRRIGATION PLAN

SCALE	ISSUE DATE
SCALE: 1" = 20'	June 1, 2022
SHEET	REVISION
IR102	

1 MEDIAN F



2 ALTERNATE 1 - MEDIAN G

DESCRIPTION	APPROVED MANUFACTURERS
Multi-Stream Shrub Rotor	Rain Bird 1912-SAM P45 Rotorator-PC** Hunter PROS-12-PRS40-CV Rotorator PC**
Multi-Stream Shrub Rotor	Rain Bird 1812-SAM P45 Rotorator-EST/SS1** Hunter PROS-12-PRS40-CV Rotorator LCS/RCS/SS**
Remote Control Valves	Rain Bird 100 P/GA Series Hunter PGV 101G Series
Controller	Rain Bird TBOS-BT Hunter Node-BT
Rain Sensor	Rain Bird RSD-BEX Hunter Rain-Click-RFC
Backflow Preventer	Wilkins 720A 1" PVB Hunter Rain-Click-RFC
Meter	1" Meter (Refer to Water Meter pit Detail on 4/L203 and Water Main Tap on 5/L203)

1" 200 PSI SDR 21 PVC Lateral Pipe
1" 200 PSI SDR 21 PVC Mainline Pipe w/ Trace wire

# OF ZONE	GPM	VALVE SIZE
7	2	1/2"

116 SHADOW LAWN DRIVE  
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(317) 585-0167  
www.irrigationdesignsource.com

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317-585-0167 FAX 317-585-0167  
www.askautomatic.com

**GENERAL IRRIGATION NOTES:**

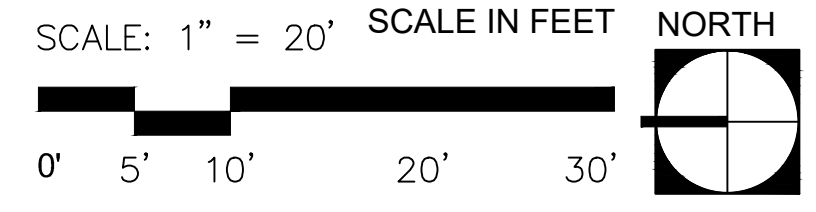
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- Refer to the specifications for additional detailed information.



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MEP:

201 S Capitol Avenue • Suite 310  
INDIANAPOLIS, IN 46225  
TEL (317) 352-5822 • FAX (317) 352-5821

IRRIGATION:

116 Shadow Lawn Drive  
Fishers, IN 46038  
P: 800.842.3911  
E: www.askautomatic.com

TRAFFIC:

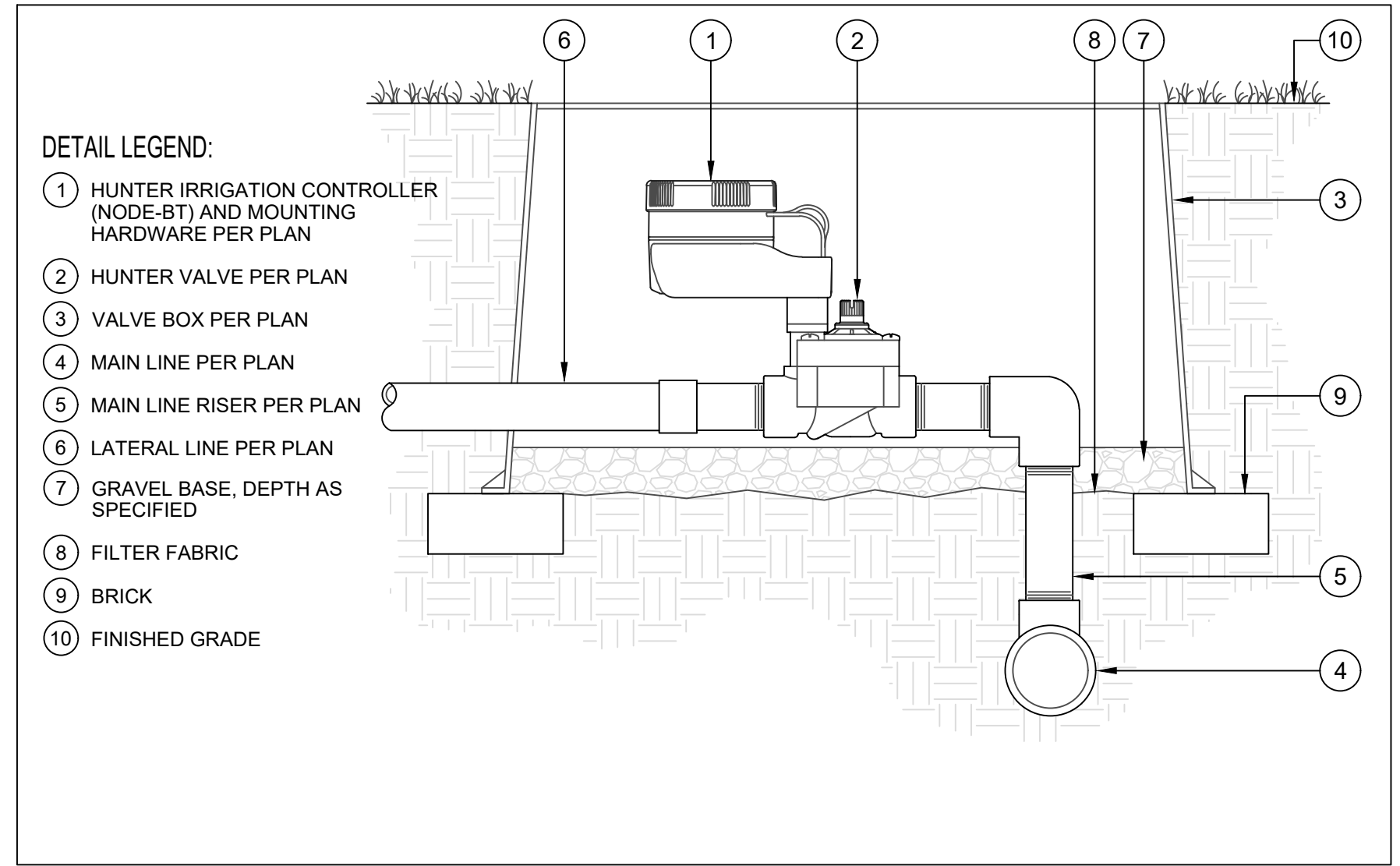
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Indianapolis, IN 46240  
P: 317.547.5580  
E: structurepoint.com

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
SC	SC	
CHECKED: RR	CHECKED: RR	

GREENFIELD, INDIANA  
STATE ROAD 9 MEDIAN IMPROVEMENTS

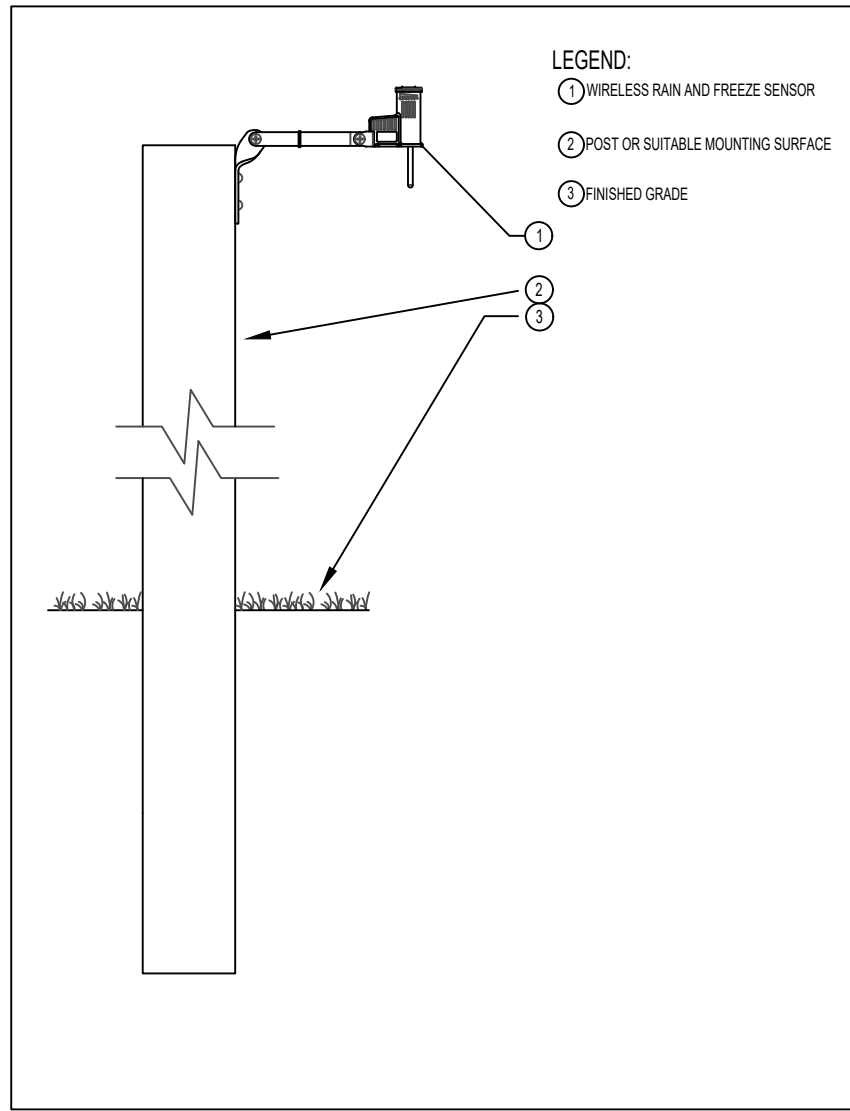
IRRIGATION PLAN

SCALE	ISSUE DATE
SCALE: 1" = 20'	June 1, 2022
SHEET	REVISION
IR103	



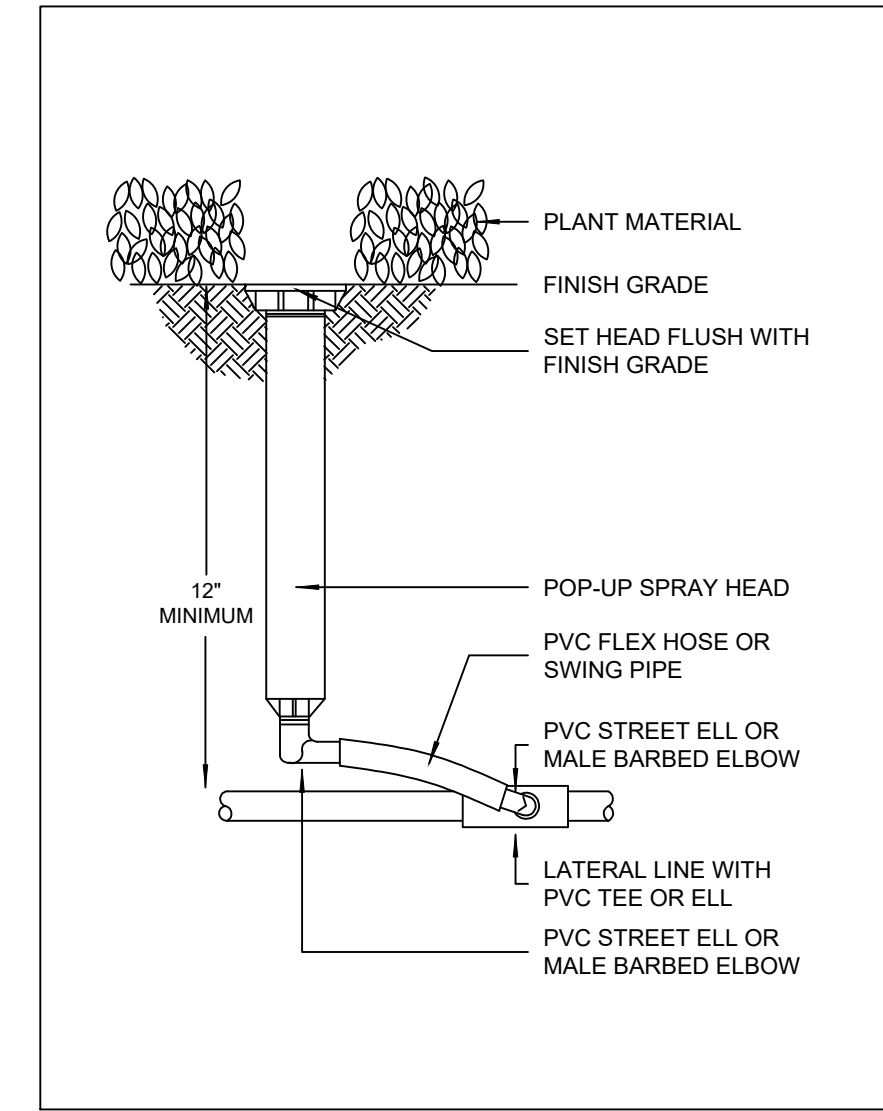
- DETAIL LEGEND:**
- ① HUNTER IRRIGATION CONTROLLER (NODE-BT) AND MOUNTING HARDWARE PER PLAN
  - ② HUNTER VALVE PER PLAN
  - ③ VALVE BOX PER PLAN
  - ④ MAIN LINE PER PLAN
  - ⑤ MAIN LINE RISER PER PLAN
  - ⑥ LATERAL LINE PER PLAN
  - ⑦ GRAVEL BASE, DEPTH AS SPECIFIED
  - ⑧ FILTER FABRIC
  - ⑨ BRICK
  - ⑩ FINISHED GRADE

IRRIGATION BLUETOOTH CONTROLLER

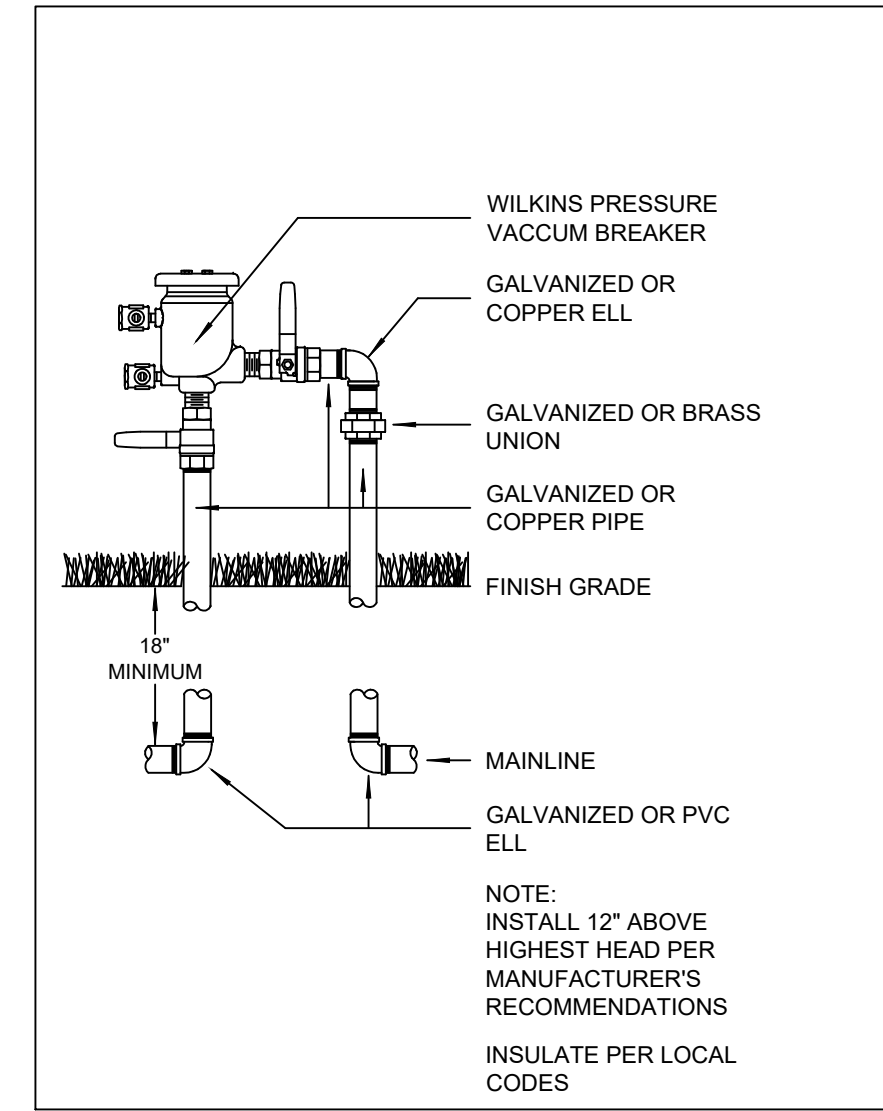


- LEGEND:**
- ① WIRELESS RAIN AND FREEZE SENSOR
  - ② POST OR SUITABLE MOUNTING SURFACE
  - ③ FINISHED GRADE

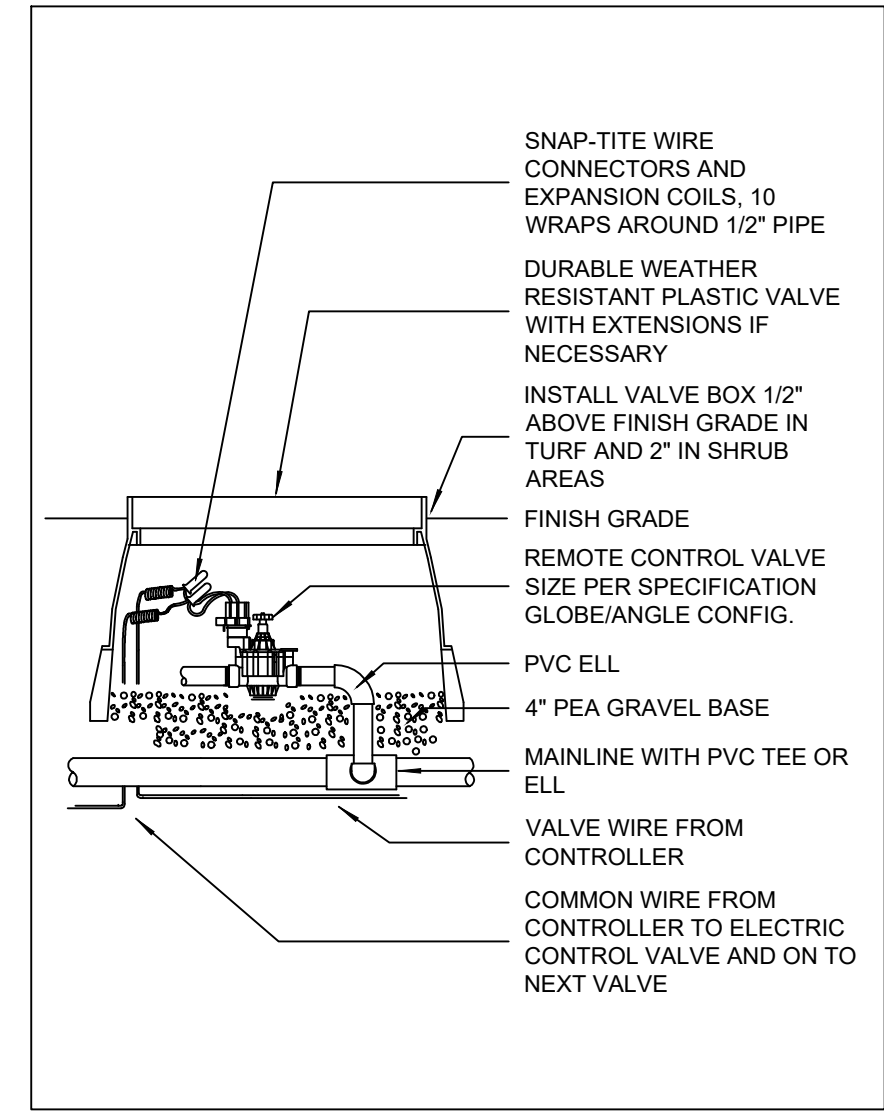
RAIN SENSOR



SHRUB SPRAY HEAD



BACKFLOW PREVENTER-PVB



REMOTE CONTROL VALVE

**LEGEND**

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— 1" 200 PSI SDR 21 PVC Lateral Pipe  
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116 SHADOWLAWN DRIVE  
FISHERS, IN 46038  
(317) 585-0167  
www.irrigationdesignsource.com

# OF ZONE  
GPM  
VALVE SIZE

MEMBER  
THE IRRIGATION ASSOCIATION

AUTOMATIC SUPPLY  
SUPPLY COMPANY  
116 SHADOWLAWN DRIVE FISHERS, IN 46038  
317/842-3123 800/842-3911 Fax 317/845-0977  
www.askautomatic.com

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15. Refer to the specifications for additional detailed information.





# NODE-BT

Manage gardens, greenhouses, traffic medians, and temporary irrigation sites from a smartphone without opening the valve box.

## KEY BENEFITS

- Number of stations:
  - 1, 2, or 4
- Bluetooth® battery-operated controller for automatic irrigation without AC power
- 1 smartphone manages an unlimited number of controllers
- Waterproof enclosure seal protects against water ingress
- Active station LEDs and battery-life LED indicator for battery replacement
- 3 programs with 8 start times each and 1 second to 12-hour run times
- Suspend irrigation up to 99 days during the off-season
- Manual push-button operation for quick operation without a smartphone
- Delay Between Stations for slow-closing valves or pump recharge
- Add soil moisture sensor for compliance with LEED projects and agricultural applications
- Cycle and Soak prevents water waste and runoff in areas with elevation changes or tight soils
- Monthly and global seasonal adjustment for quicker schedule adjustments without changing run times
- Secure passcode protection prevents unauthorized schedule changes
- Mounts to Hunter solenoids, pipes, flat surfaces, or inside the valve box

## OPERATING SPECIFICATIONS

- One or two 9V alkaline batteries
- Operates DC-latching solenoids (P/N 458200)
- 100' maximum wire runs, 18 AWG wire only
- Station output: 9-11 VDC
- P/MV output: 9-11 VDC
- Sensor inputs: 2
- Approvals: IP68, Bluetooth 5.0 BLE, UL, cUL, FCC, CE, RCM
- Warranty period: 2 years

## APP SPECIFICATIONS

- iOS® 9.0 or above
- Android™ 5.0 or above
- Maximum communication distance: 50'

NODE-BT	
Model	Description
NODE-BT-100	Single-station Bluetooth battery controller and DC-latching solenoid
NODE-BT-100-LS	Single-station Bluetooth battery controller
NODE-BT-200	2-station Bluetooth battery controller
NODE-BT-400	4-station Bluetooth battery controller
NODE-BT-100-VALVE	Single-station Bluetooth battery controller with PGV-101G valve and DC-latching solenoid (NPT threads)
458200	DC-latching solenoid
SC-PROBE	Soil probe for moisture sensing

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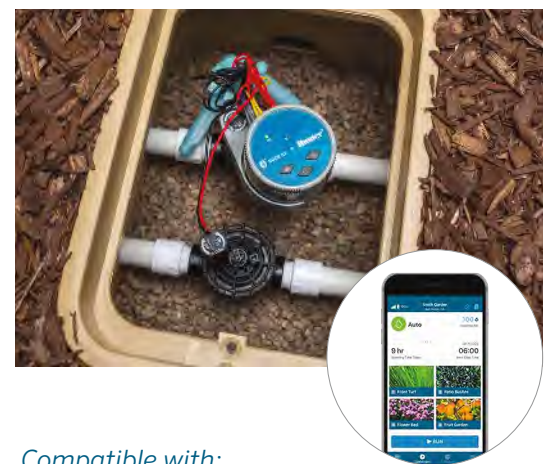


**NODE-BT**  
Diameter: 3½"  
Height: 3"



**SC-PROBE** Soil Moisture Sensor Probe  
Diameter: 1"  
Height: 3¼"  
Controller to probe: 100' maximum  
18 AWG direct-burial wire

## NODE-BT



Compatible with:



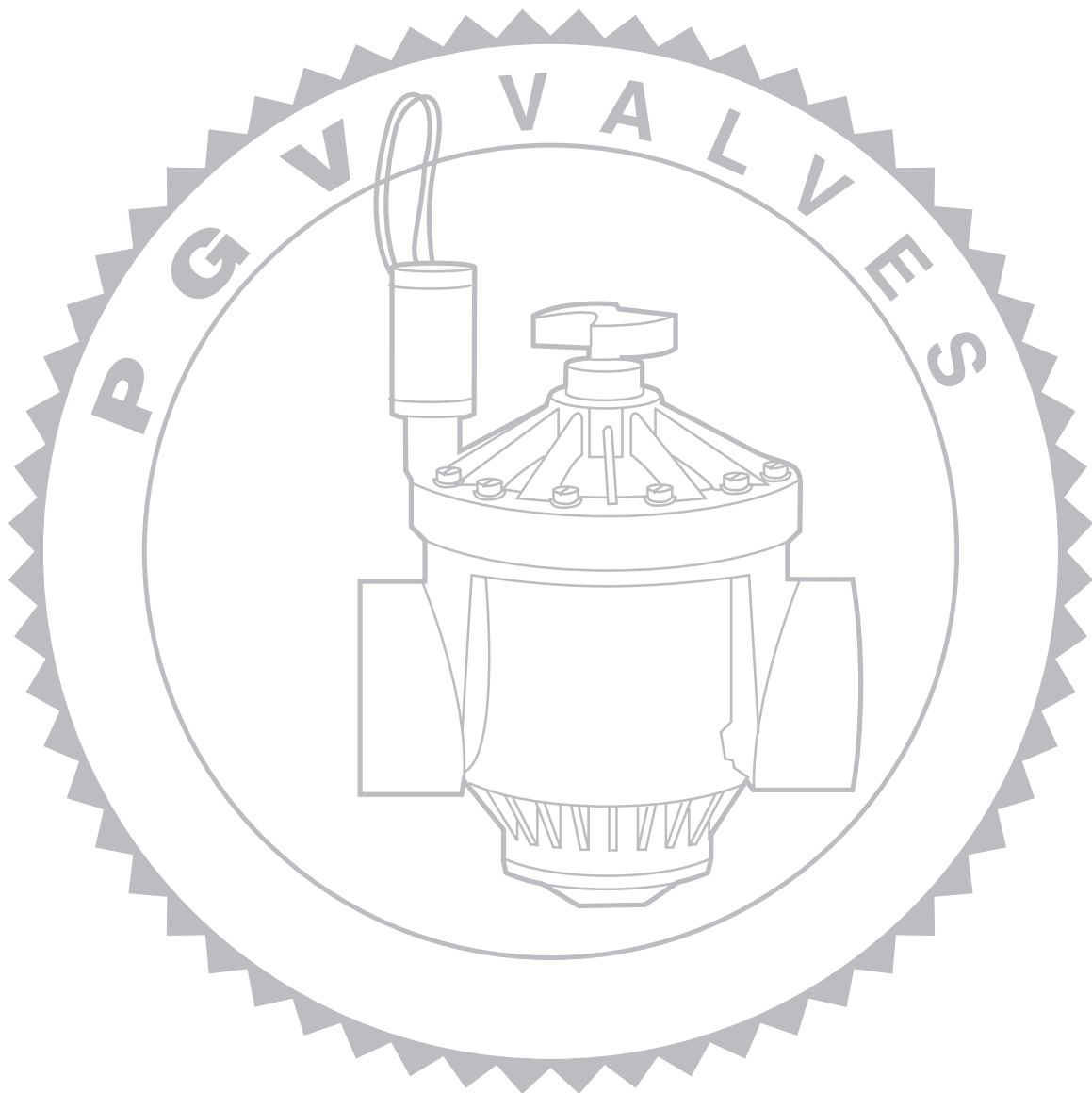
**Mini-Clik  
Sensor**  
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**Freeze-Clik  
Sensor**  
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# PGV Valves

*Rugged, Professional-Grade Valves Designed to  
Handle the Full Range of Landscape Needs*





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## PRODUCT OVERVIEW

The same HUNTER quality found in all of our remote control valves is also found in the PGV family. This **Professional Grade Valve** is a solid, heavy-duty performer designed to satisfy the requirements of the most demanding job sites.

### *Meets the Needs of All Residential/Commercial Projects*

The versatility of the PGV valve is the answer to anyone who demands options. The valve is offered as an angle, globe or globe/angle combination in a full range of sizes, including 1" with or without flow control, 1½", and 2". Flow capability ranges from a low of 0.20 gpm (0.05 m<sup>3</sup>/hr, 0.76 l/m) all the way up to 120 gpm (27.2 m<sup>3</sup>/hr, 454.2 l/m).

Available as an option, the Hunter Accu-Set™ valve pressure regulator is an important tool for the professional installer. The Accu-Set™ is the product of choice for installation on PGV valves when the static supply pressure is just too high for sprinkler operation or when the irrigation main lines need to be at maximum pressures due to long pipe runs. Also, the Accu-Set™ is the ideal pressure regulator to use when different irrigation zones require different outlet pressures due to product specifications, such as sprays and rotors. Easy to install and easy to read, this dial-in pressure regulating module automatically adjusts as needed to provide an accurate and consistent working pressure in the zone piping.

### *Designed for Years of Life*

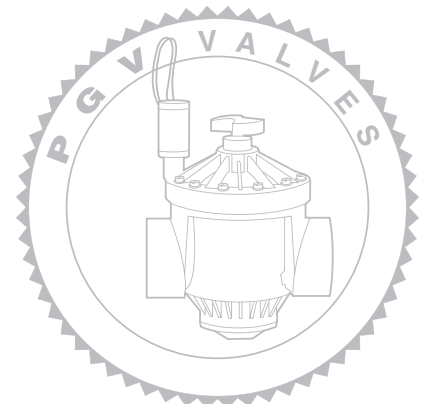
Hunter developed the PGV valve with its multitude of features, because of a market need for a strong product with dependable performance.

The rugged, extremely tough body and bonnet contribute to a high pressure rating of 150 psi (10.3 bars, 1034 kPa). In addition, the valve features captive bonnet screws, diaphragm and a captive solenoid plunger. Plus, the heavy-duty Hunter solenoid, with its 5-year warranty, is sure to keep everything working for years and years.

### *Easy to Install, Easy to Maintain*

Maintenance is an ongoing reality to any project and like all Hunter products, the easy-maintenance PGV was designed with the installation and service needs of the professional installer in mind. Offering a globe/angle configuration in one valve allows the installer to readily place the valve for easy access. The PGV's diaphragm, solenoid plunger, and bonnet screws are all captive parts, eliminating the chance of lost parts. Through-holes in the body allow dirt to fall through the screw holes instead of allowing it to pack at the bottom, where it can make it impossible to tighten the screw upon reassembly.

The bonnet screws used in the PGV line are unique to Hunter valves. These screws, specifically designed for use in plastic, thread quicker and truer into the valve body. They are compatible with a variety of tools: a hex nut driver, a Phillips screwdriver or slotted screwdriver for easy servicing. When installing irrigation systems, something as simple as a bonnet screw design is all that it takes to save time and money.



## FEATURES AND BENEFITS

### *Globe or Angle Models...*

#### *Flexibility in design*

Many times the irrigation main line is installed much deeper than the system's lateral lines. This may be due to local codes or for freeze protection. For these situations, Hunter offers 1½" and 2" valves with a globe/angle configuration in one valve. The globe configuration offers the best choice for those systems that have the main line at the same depth as the laterals. The angle configuration allows the installer to place the valve on top of a deep main line, which allows easy access to the valve for maintenance.

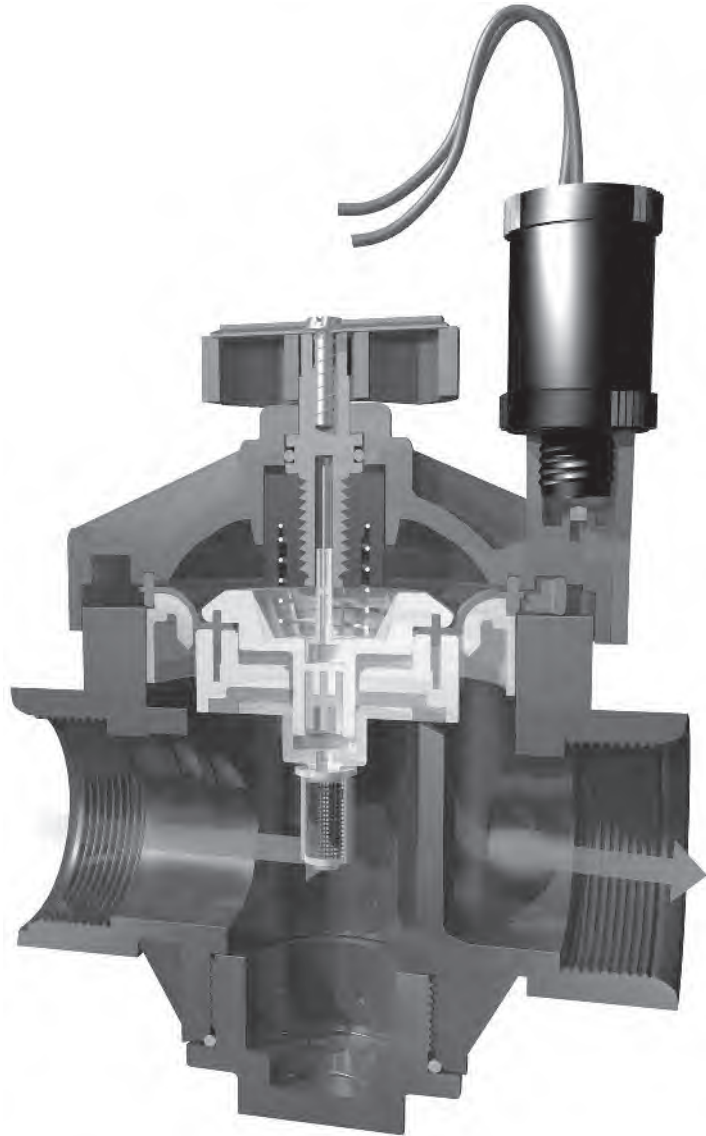
In addition, the PGV angle configuration boasts a lower pressure loss across the valve compared to a globe style valve, providing a big advantage on systems that may experience low operating pressures.

### *Body Options...*

#### *Maximum choices, minimum effort*

Hunter is aware of the many different valve requirements that are prevalent in today's irrigation market. With that in mind, the PGV is designed as a very adaptable valve in the residential/commercial market. The PGV is available with a variety of inlet and outlet sizes and configurations: NPT, BSP, Male x Barb, Male x Male, and Slip.

The barb outlet valves have become an instant hit in the colder regions of the US, where polyethylene pipe is frequently used for laterals. Contractors report their installation times have decreased tremendously when this valve is used on their jobs. Eliminating the addition of an extra adapter or two to the manifold not only saves time and money, but also saves on the possibility of leaks.



*The many options available:*

**1" GLOBE  
with FLOW CONTROL**

fpt x fpt — NPT, BSP  
mpt x mpt — NPT, BSP  
mpt x barb — NPT, BSP  
slip x slip



**1" GLOBE  
without FLOW CONTROL**

fpt x fpt — NPT, BSP  
mpt x mpt — NPT, BSP  
mpt x barb — NPT, BSP  
slip x slip



*Note: The 1" barb is sized for USA poly markets only.*

**1" ANGLE  
with FLOW CONTROL**

fpt x fpt — NPT

**1" ANGLE  
without FLOW CONTROL**

fpt x fpt — NPT



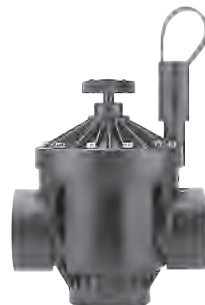
**1½" GLOBE/ANGLE  
with FLOW CONTROL**

fpt x fpt — NPT, BSP



**2" GLOBE/ANGLE  
with FLOW CONTROL**

fpt x fpt — NPT, BSP



**Barbed Connections...**

*Poly pipe connections made easy*

An overwhelming request by Hunter valve users was to develop a valve with a barb outlet connection built into the valve for poly pipe users.

Hunter responded with four 1" models to choose from. The 1" globe with flow control in MNPT and MBSP threads

and the 1" globe without flow control in both MNPT and MBSP threads are now available.

With all of these models, the time-saving benefits have proven to be substantial for the installer, because they no longer need to thread adapters or nipples wrapped with Teflon tape into the valve to attach to poly pipe systems.



**Flow Range...**

*Highly versatile valve for all flow requirements*

The flow range of the PGV is exactly what installers are looking for in 1", 1½", and 2" valves. Systems requiring a flow rate as low as 0.20 gpm (12 gph), such as for low-volume irrigation, are easily accommodated with the 1" PGV. Also, irrigation systems running up to 120 gpm per zone, which can be found on large commercial sites, are well within the 2" valve's designed capabilities.

**High-Grade Materials Used for a 150 psi Rating...**

*Made of durable materials to resist wear*

If you are in the market for a valve that needs to take the pressure, the PGV is your choice. Featuring solid heavy-duty construction built with an ABS skirted bonnet, this valve takes up to a constant 150 psi without regard to hot summer temperatures. The superior design of the PGV helps eliminate any reduction in performance when temperatures go up: a common occurrence with 100% PVC constructed valves.

## FEATURES AND BENEFITS *(continued)*

### **Heavy-Duty Solenoid...**

*Provides dependable operation and long life*

The entire line of Hunter valves has something in common: the same heavy-duty five-year warranty solenoid. Hunter's "Totally Encapsulated" solenoid design features a completely closed bobbin core and glass reinforced nylon over-molded case. This rugged design provides increased protection to the solenoid coil from water intrusion – a primary cause of failures in solenoids. Installers will find that not having to stock two or three different solenoids for valves of the same manufacturer are a real plus. Another plus is the solenoid's captive plunger, which enables easy servicing of the solenoid but eliminates the chance for any lost internal parts.

It only takes 1½ turns to remove or replace the solenoid which makes twisted solenoid wires a non-issue (a tremendous benefit to installers or maintenance people who work with valves).

The Hunter solenoid is unique because it operates on a reverse flow principle. The center hole in the solenoid bowl is an inlet port, instead of an exhaust port. When installing long wire runs, this solenoid is very efficient, especially under high system pressures.

A big advantage to this reverse flow action is that it reduces potential large pressure spikes against the valve. Such spikes could cause damage not only to the valve, but to other components of the irrigation system as well. With the PGV, when a surge pressure spike hits the closed valve, the solenoid plunger will open slightly to allow the spike to travel downstream and dissipate through the zone piping, minimizing any damage that could occur. The solenoid plunger then closes immediately, preventing unscheduled system operation.

### **Captive Bonnet Screws, Diaphragm and Solenoid Plunger...**

*No lost parts during servicing*

When servicing is required, the PGV is the valve that makes it easy. The screws, captive within the bonnet, are designed to be removed by a nut driver, Phillips, or slotted screwdriver. Another unique characteristic to the PGV line is the type of screw used. Specifically designed for use in plastic, the screw sports a large thread gain, allowing it to thread quicker and truer into the valve body.

In addition, all parts are captive within the solenoid (a great feature in a valve, assuring those parts will not be lost in the mud). The PGV also features screw through-holes in the valve body for trouble-free screw placement. If dirt gets into these holes it's no problem: as the screw is turned into the body, the dirt comes out the bottom. (It sounds simple, but other brands actually require removal of the valve to clean out the debris.)

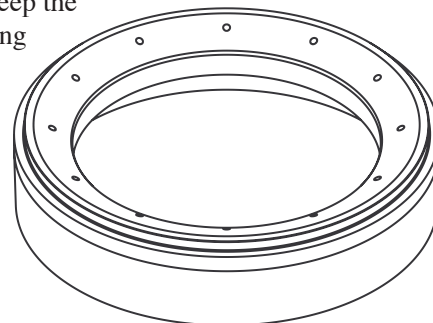
### **Fully Supported Diaphragm...**

*Prevent stress failure in tough conditions*

The PGV diaphragm is fully supported by an ingenious diaphragm support ring designed to prevent premature stress failure. The ring is also designed with small holes in it. These holes allow water to keep the diaphragm from sticking to the support ring after periods of non-use, such as before the landscaping is installed or winter shutdown.



*Diaphragm support ring prevents stress failures.*

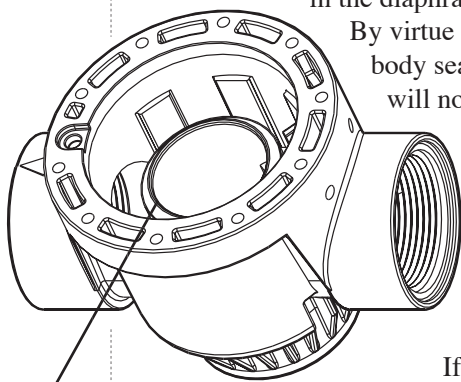


*Diaphragm support ring prevents stress failures.*

## **Debris Tolerant...**

*Designed to eliminate failure caused by debris*

With the PGV valve installed in the irrigation system, callbacks for weeping valves are a thing of the past. The PGV is highly debris tolerant because of its “crowned” body seat and a revolutionary new polymer that is used in the diaphragm seat assembly.



*Crowned body seat*

By virtue of the fact that the body seat is crowned it will not allow any contaminants to catch during valve closing, making it very difficult for debris to become trapped by the diaphragm.

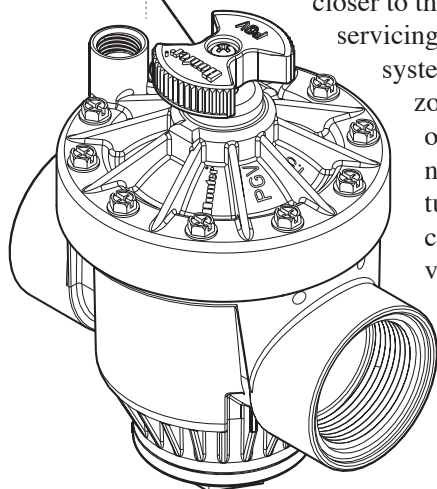
If debris were to become imbedded in the diaphragm seat, the polymer material utilized in the diaphragm seat retains its original shape after the imbedded debris is flushed through the valve.

## **Adjustable Flow Control With Non-rising Handle...**

*Flow adjustment and servicing made easy*

Flow management is a simple process when using the Hunter PGV with its non-rising flow control handle in the 1½" and 2" sizes. A non-rising handle means the valve can be placed

*Non-rising flow control handle*



closer to the valve box lid for easier servicing. When fine tuning the system, adjust to the desired zone flow either by hand or using a valve key. If necessary, the easy-to-turn flow control handle completely shuts the valve off without the possibility of damage to the diaphragm, even under maximum pressure and flow conditions.

## **Optional Flow Control in 1" Sizes**

*Facilitates flow management as needed*

The 1" PGV can be ordered with or without an optional flow control stem. With the flow control option, zone water pressure and flow can be managed right at the valve for optimum efficiency. A removable flow control handle, generously sized for easy gripping, makes flow adjustment a quick and easy process.

## **Heavy-Duty Bonnet...**

*Designed to provide maximum durability*

Through repeated testing of valve designs, the PGV has incorporated in it a bonnet that goes beyond the typical plastic valve bonnet. The design features a skirt around the perimeter of the bonnet, which gives it incredible rigidity or “hoop strength.” An example of this would be the difference in rigidity between a Styrofoam cup with a lid attached and one without a lid attached. Without a lid, the cup is very malleable, but when a lid is attached the cup walls are strengthened tremendously.

## **Bonnet Air Relief...**

*Air release to minimize system stresses*

The PGV is designed with a patent pending special air relief feature that facilitates the removal of any air bubble from the top underside of the bonnet. The removal of air facilitates the elimination of water hammer. When the flow control stem is pushed downward, any air trapped in the valve is released. The water pressure will then force the stem back up into place without leaking.

## **Internal Manual Bleed...**

*Completely dry manual operation*

For fast manual operation, a quick ½ turn of the solenoid allows water to bleed off of the top of the diaphragm and, as a result, opens the valve. All the water goes through the valve, which means no more water continuously leaking into valve boxes.



## FEATURES AND BENEFITS (continued)

### **Accu-Set™ Dial Control Pressure Regulation...**

*For use on 1½" and 2" valves*

Exact pressure settings are a certainty every time with Hunter's Accu-Set™ pressure regulating module with its easy-to-read dial settings. This dial assures exact downstream pressure between 20 and 100 psi (1.4 to 7.0 bars, 138 to 689 kPa). There are no extra gauges to carry for pressure adjustments or inspection. (A schraeder valve is included on the unit for job specifications requiring checking and setting using a gauge only.)

The Accu-Set dial-in module provides an accurate working (or dynamic) pressure to the zone. The module constantly adjusts as needed to provide a consistent outlet pressure regardless of inlet pressure variations.

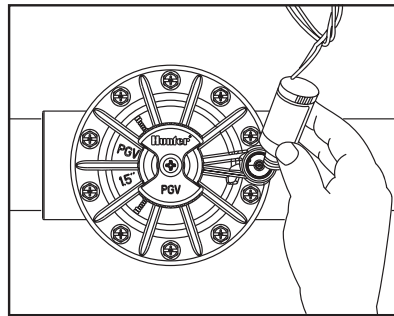
The Accu-Set pressure regulator is an important tool a professional installer will use when the irrigation main lines need to be at maximum pressures due to long pipe runs or when static supply pressures are too high for sprinkler operation. Also, the Accu-Set is the product of choice when different zones require different outlet pressures due to product specifications, such as large rotor sprinklers zoned off the same main line as sprayheads.

The benefit of the Accu-Set is that the irrigation system does not need to be pressurized to adjust it, resulting in a very fast installation. With this unique pressure regulating module, just set the easy-to-read dial to the desired pressure, with or without the system operating. The pressure dialed in is the pressure delivered to the zone.

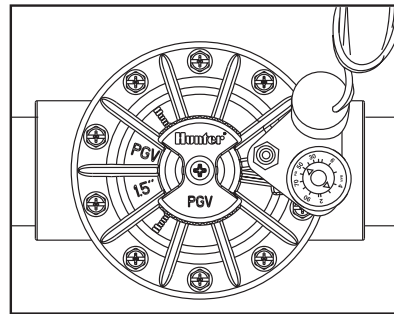
The optional Accu-Set pressure regulating module is easy to retrofit on 1½" and 2" field installed PGV valves. On systems determined to have high-pressure problems after installation, the amount of time saved in labor, along with reduced costs, is considerable. That's because the Accu-Set is installed without a hassle, without cutting pipe and without replacing valves.

### **Accu-Set Installation Instructions**

1. Remove the solenoid from the Hunter PGV irrigation valve. (The 1" valve with flow control is not designed for use with the Accu-Set.)



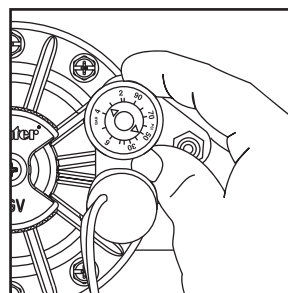
2. Thread the Accu-Set into the solenoid area of the PGV.



3. Thread the solenoid into the Accu-Set.

### **Accu-Set Pressure Regulator Adjustment**

1. Turn the clear dial on the top of the Accu-Set until the arrow underneath the clear dial is pointing to the desired downstream pressure.
2. The white colored scale is for PSI, the yellow colored scale is for BAR.



## PRODUCT COMPARISONS

Features	Hunter PGV	Rainbird PGA	Irritrol 200B	Toro 252	Nelson 7900	Weathermatic 21000
150 PSI Rated Operating Pressure	✓	✓	✓	✓	✓	✓
Models to Accommodate Globe/Angle Configuration	✓	✓	✓	✓	✓	
Flow Control with Non-Rising Handle	✓	✓				✓
Internal Manual Bleed	✓	✓	✓		✓	✓
Bonnet Air Relief	✓		✓	✓	✓	
Captive Diaphragm	✓				1" model	
Captive Bonnet Screws	✓		✓		1" model	
Triple Tool Stainless Steel Bonnet Screws	✓		✓		1" model	
Easy Bonnet Removal (4 Screws on 1" Valve)	✓				✓	
Less Than 1½ Turns to Remove Solenoid	✓					
Reverse-Flow Solenoid Design to Reduce Line Surges	✓					
Interchangeable Solenoid with All Hunter Plastic Valves	✓		✓		✓	
Female Inlet/Outlet – NPT / BSP Option	✓	✓	✓	✓	✓	✓
Male Inlet/Outlet – MPT / Barb Option	✓					
1" Valve Inlet/Outlet – Solvent-Weld Slip Option	✓					
Vent Holes in Diaphragm Support	✓					
Dial to Setting Pressure Regulator Option without extraneous tubing	✓		✓			
Less Than 2.5 PSI Loss at 25 GPM in 1" Valve	✓					
Less Than 3.1 PSI Loss at 100 GPM in 2" Valve	✓			✓		
Optional Conduit Cover	✓	✓	✓		✓	

### SPECIFICATION GUIDE

EXAMPLE: **PGV - 100G - S - AS**

MODEL PGV	FEATURES	OPTIONS FACTORY INSTALLED	OPTIONS USER INSTALLED
	<b>100G</b> = 1" Globe Valve, no Flow Control <b>101G</b> = 1" Globe Valve, with Flow Control <b>100A</b> = 1" Angle Valve, no Flow Control <b>101A</b> = 1" Angle Valve, with Flow Control <b>100MB</b> = 1" Globe Valve, no Flow Control, Male Thread x Barb <b>100MM</b> = 1" Globe Valve, no Flow Control, Male x Male <b>101MM</b> = 1" Globe Valve, with Flow Control, Male x Male <b>151</b> = 1½" Globe/Angle Valve, with Flow Control <b>201</b> = 2" Globe/Angle Valve, with Flow Control	<b>S</b> = Slip x Slip (1" Models Only) <b>B</b> = BSP Threads <b>DC</b> = DC Latching Solenoid	<b>AS</b> = Accu-Set™ Pressure Regulator (1½" and 2" Models Only) <b>R</b> = Reclaimed Water Identification Handle or Tag <b>CC</b> = Conduit Cover

## TECHNICAL INFORMATION

### Models

- PGV-100G – 1" plastic globe valve
- PGV-101G – 1" plastic globe valve with flow control
- PGV-100A – 1" plastic angle valve
- PGV-101A – 1" plastic angle valve with flow control
- PGV-100MM – 1" plastic globe valve, male x male threads
- PGV-101MM – 1" plastic globe valve with flow control, male x male threads
- PGV-100MB – 1" plastic globe valve, male thread x barb
- PGV-101MB – 1" plastic globe valve with flow control, male thread x barb
- PGV-151 – 1 1/2" plastic globe/angle valve with flow control
- PGV-201 – 2" plastic globe/angle valve with flow control

### Dimensions

- 1" Globe – 5" H (13 cm) x 4 1/2" L (11 cm) x 2 1/2" W (6 cm)
- 1" Angle – 5 1/2" H (14 cm) x 3 1/2" L (9 cm) x 2 3/4" W (7 cm)
- 1 1/2" Globe/Angle – 7 1/2" H (19.1 cm) x 5 3/4" L (14.6 cm) x 4 1/2" W (10.8 cm)
- 2" Globe/Angle – 8" H (20.3 cm) x 6 3/4" L (17.1 cm) x 5 1/4" W (13.3 cm)

### Operating Specifications

- Flow: 0.20 to 120 gpm (0.05 to 27.2 m<sup>3</sup>/hr; 0.76 to 454.2 l/min)
- Pressure: 20 to 150 psi (1.4 to 10.3 bars; 138 to 1034 kPa)
- Heavy-duty solenoid: 24VAC, 370mA inrush current, 190mA holding current, 60 cycles
- 475mA inrush current, 230mA holding current, 50 cycles

### OPTIONS Available

- Accu-Set™ pressure regulator
- Reclaimed water identification handle
- DC latching solenoid
- Conduit cover

#### PGV Pressure Loss in PSI

GPM	1" Globe	1" Angle	1 1/2" Globe	1 1/2" Angle	2" Globe	2" Angle
1	1.1	1.0				
5	1.9	1.0				
10	1.9	1.0				
15	1.6	1.0				
20	3.3	2.0	3.0	3.0	1.0	1.0
30	6.1	3.0	3.0	3.0	1.0	2.0
40			3.0	3.0	2.0	2.0
50			4.0	3.5	1.0	1.0
60			5.0	4.0	2.0	2.0
80			5.5	4.5	3.0	2.0
100					5.0	3.0
120					6.0	5.0

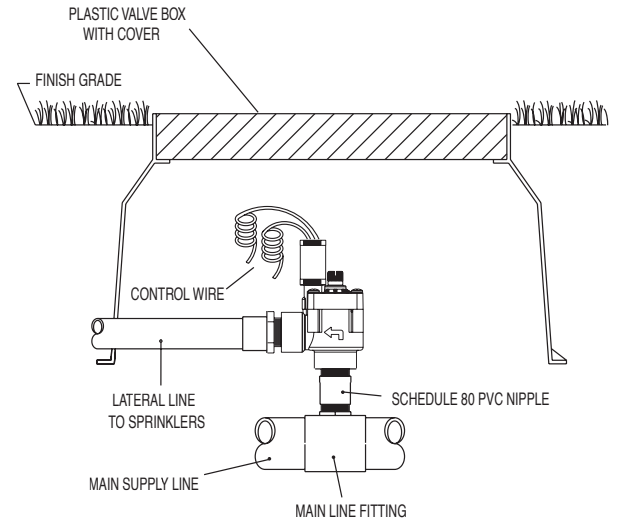
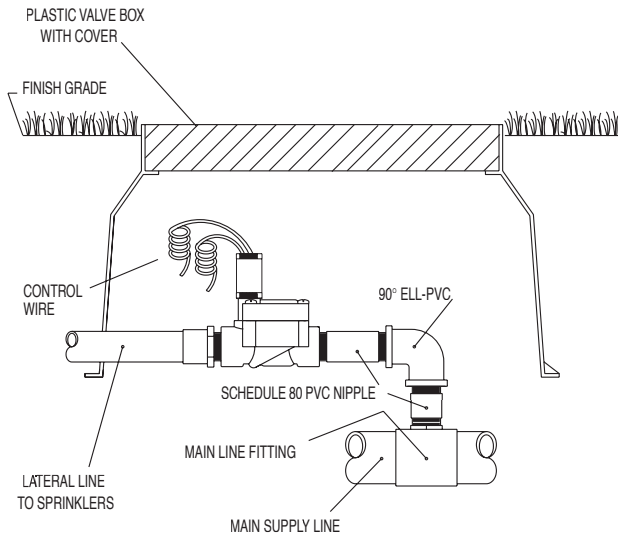
#### PGV Pressure Loss in Bars

m <sup>3</sup> /hr	1" Globe	1" Angle	1 1/2" Globe	1 1/2" Angle	2" Globe	2" Angle
0.23	0.08	0.07				
1.14	0.13	0.07				
2.27	0.13	0.07				
3.41	0.11	0.07				
4.54	0.23	0.14	0.21	0.21	0.07	
6.81	0.42	0.21	0.21	0.21	0.07	
9.08			0.21	0.21	0.14	
11.36			0.28	0.24	0.07	
13.63			0.34	0.28	0.14	
18.17			0.38	0.31	0.14	
22.71					0.21	
27.25					0.34	

#### SRV Pressure Loss in kPa

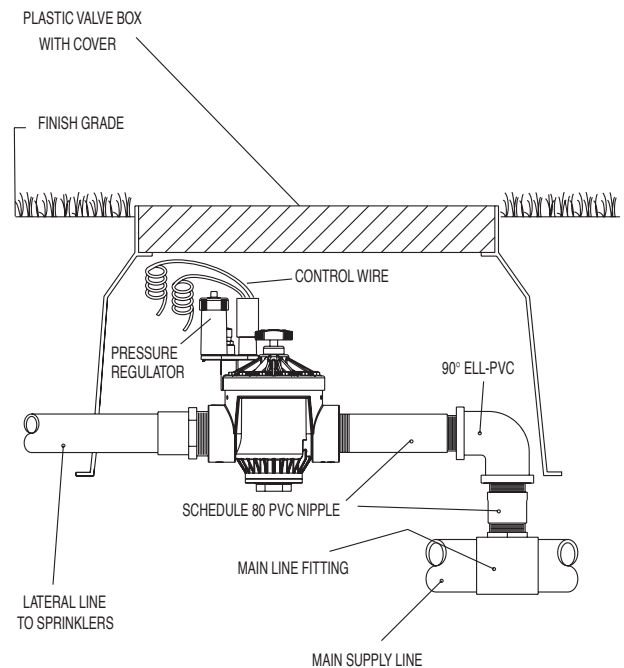
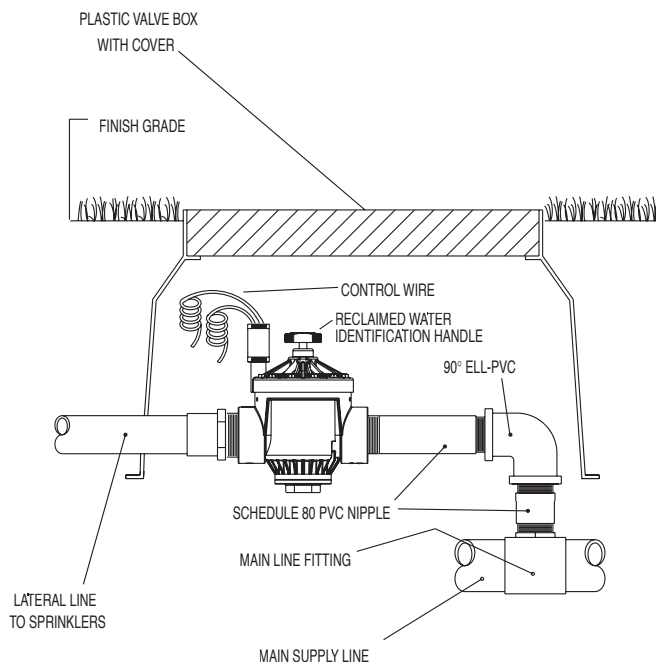
l/min	1" Globe	1" Angle
4	7.58	6.89
19	13.10	6.89
38	13.10	6.89
52	11.03	6.89
76	22.75	13.79
114	42.06	20.68

## INSTALLATION DETAILS



**Hunter® 1" PGV-GLOBE**

**Hunter® 1" PGV-ANGLE**



**Hunter® 2" PGV-NP**

**Hunter® 2" PGVW/PR**

## VALVE OPERATION

### *Basic Principles of Valve Operation*

Water enters the valve from the system main line and exerts a force against the center of the valve's diaphragm. A small orifice in the diaphragm allows the water to flow through to the upper chamber between the diaphragm and the bonnet. The water continues to travel on through a port in the bonnet to the solenoid area. The solenoid has a light spring loaded metal piston that, when the valve is closed, covers the inlet port hole. The surface area that the water comes in contact with on top of the diaphragm is greater than the surface area on the bottom of the diaphragm, so the valve stays closed until the water in the upper chamber is released. (pressure x area = force)

### *Electrically Opening a Valve*

When the solenoid coil is electrically charged, the current creates an electromagnetic field and pulls the piston off of the port hole seat allowing water to flow into the solenoid chamber, out of the solenoid exhaust port, and into the downstream pipe. The solenoid ports are larger than the orifice in the diaphragm, so the water flows out of the upper diaphragm/bonnet chamber faster than it is allowed to enter. The pressure on the top of the diaphragm is released through these ports, and the force from the mainline side pushes against the diaphragm and causes the valve to open.

### *Manually Opening a Valve*

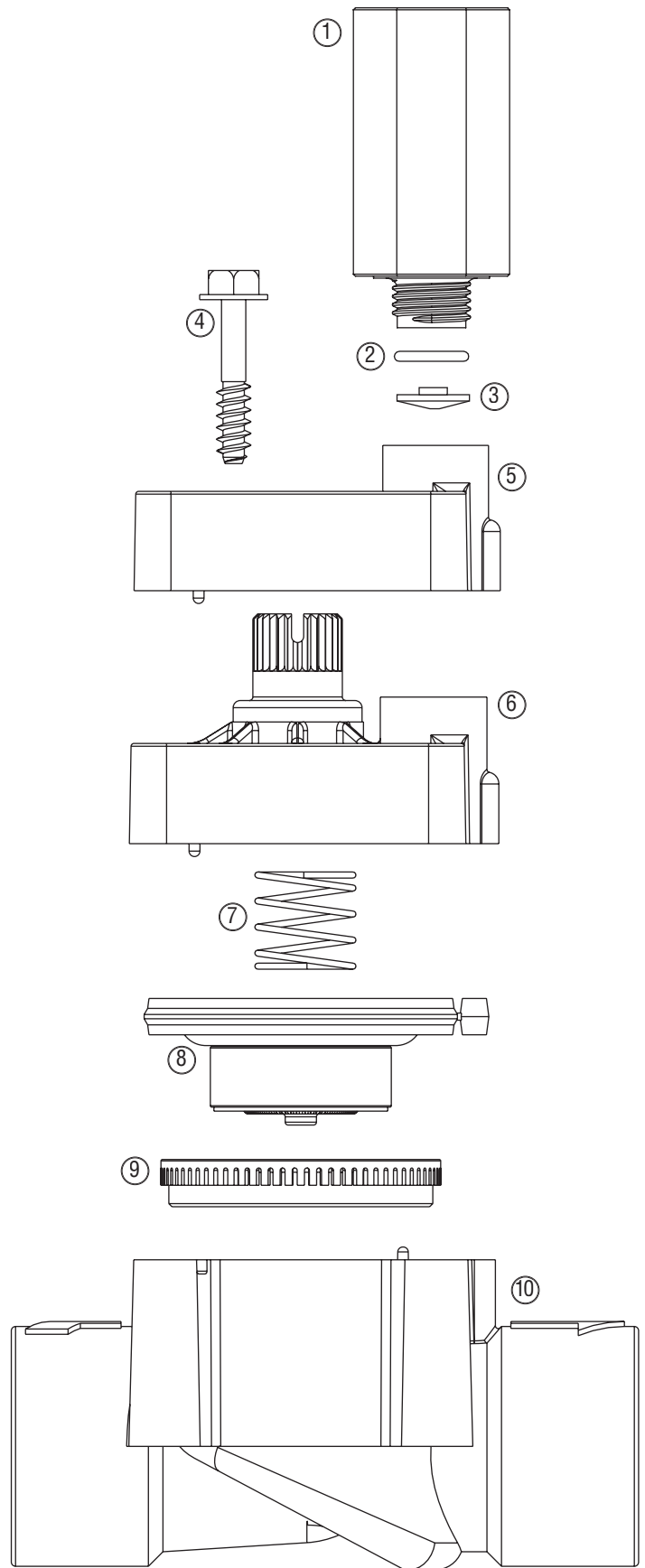
The same principle is at work when a valve is manually opened using the manual bleed. The pressure on the top of the diaphragm is released through the use of an internal or external bleed. The internal bleed on the PGV mechanically lifts the solenoid piston off of the upper chamber exhaust port allowing the water to be released into the downstream pipe. Some valves have an external bleed which allows water to exit the upper diaphragm chamber into the valve box.

### *Closing a Valve*

When the controller turns off the low voltage current flow, the solenoid piston spring pushes the piston back over the inlet port, and stops the flow of water from going through the solenoid chamber and exhaust port. The upper diaphragm/bonnet chamber begins to fill, and soon reaches an equilibrium point when the psi (pounds per square inch) is the same on both sides of the diaphragm. The diaphragm spring continues to gently push on the diaphragm, closing the valve further. The combination of the spring exerting pressure on the diaphragm and the water building up in the upper chamber bring the valve to a closed position.

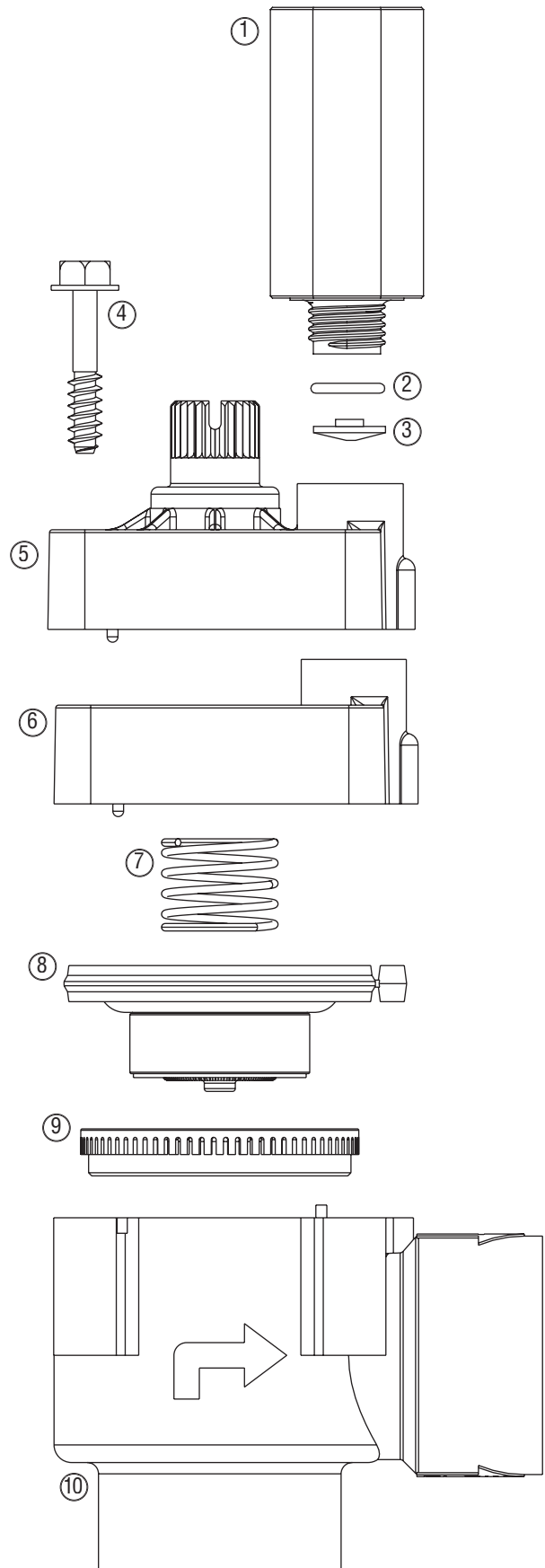
# PGV-100G/101G: PLASTIC VALVES

Item	Description	Catalog No.	
①	Solenoid Assembly	AC Solenoid	434100
	(Includes Parts 2 & 3)	DC Solenoid	458200
②	O-Ring	262600	
③	Solenoid Seal	364400	
④	Bonnet Screw	427300	
⑤	Bonnet without Flow Control	458000	
⑥	Bonnet with Flow Control	435005	
⑦	Diaphragm Spring	266000	
⑧	Diaphragm Assembly	332100	
⑨	Diaphragm Support Ring	331300	
⑩	Body	Female, NPT Thread	457700
		Female, BSP Thread	457705
		Female, Slip x Slip	457710
		Male x Male, NPT	433400
		Male x Male, BSP	433405
		Male x Barb, NPT	460700
		Male x Barb, BSP	460705
⑪	Flow Control Handle	Black	269200
		Purple	269205



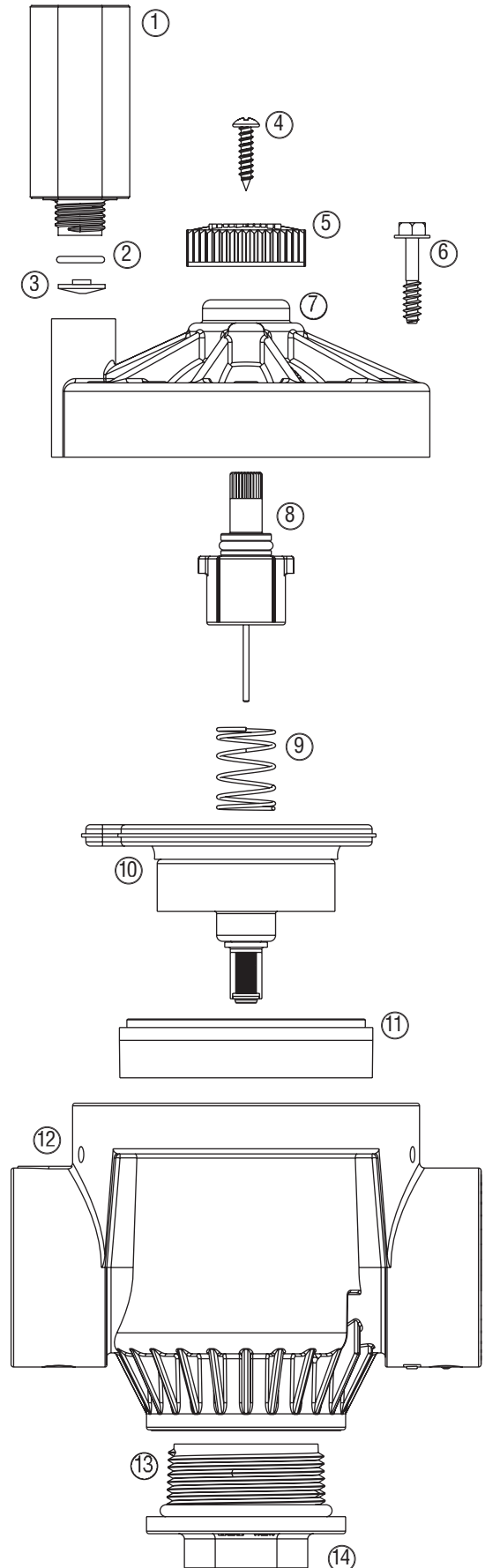
# PGV-100A/101A: PLASTIC VALVES

Item	Description		Catalog No.
①	Solenoid Assembly (Includes Parts 2 & 3)	AC Solenoid	434100
		DC Solenoid	458200
②	O-Ring		262600
③	Solenoid Seal		364400
④	Bonnet Screw		427300
⑤	Bonnet with Flow Control		379405
⑥	Bonnet without Flow Control		435005
⑦	Diaphragm Spring		266000
⑧	Diaphragm Assembly		332100
⑨	Diaphragm Support Ring		331300
⑩	Body		407000
⑪	Flow Control Handle	Black	269200
		Purple	269205



# PGV-151G, 201G: PLASTIC VALVES

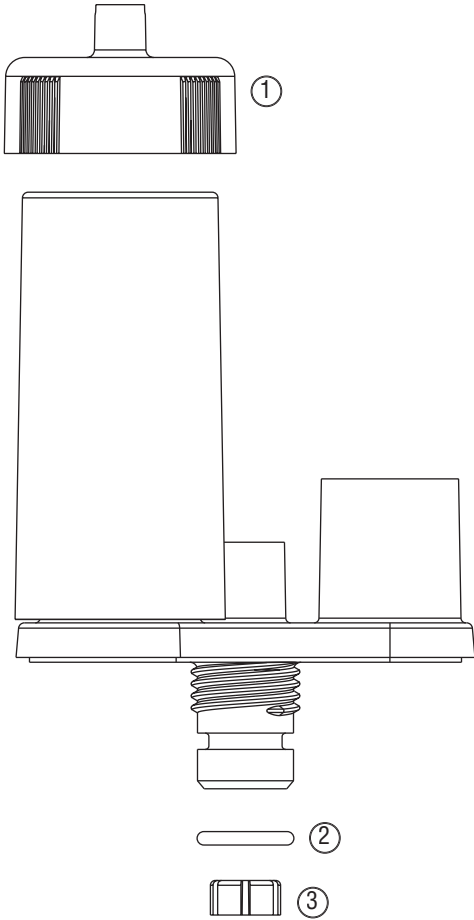
Item	Description		Catalog No.
①	Solenoid Assembly <i>(Includes Parts 2 &amp; 3)</i>	AC Solenoid	434100
		DC Solenoid	458200
②	O-Ring		262600
③	Solenoid Seal		364400
④	Flow Control Handle Screw		334000
⑤	Flow Control Handle	Black	412700
		Purple	412705
⑥	Bonnet Screw		472800
⑦	Bonnet	1½"	414000
		2"	415500
⑧	Flow Control Stem <i>(Includes O-Ring, Stem, Nut and Rod)</i>	1½"	421500
		2"	414600
⑨	Spring	1½"	412300
		2"	414200
⑩	Diaphragm Assembly	1½"	414100
		2"	415600
⑪	Diaphragm Support	1½"	413100
		2"	414800
⑫	Body	1½" NPT	433200
		1½" BSP	433205
		2" NPT	433300
		2" BSP	433305
⑬	Body Plug without O-Ring	1½" NPT	419200
		1½" BSP	419205
		2" NPT	419300
		2" BSP	419305
⑭	Plug O-Ring	1½"	413900
		2"	415400





# ACCU-SET™

Item	Description	Catalog No.
①	Adjustment Knob	368500
②	O-Ring	262600
③	Inlet Seal	368200





# Hunter®

**Hunter Industries Incorporated • The Irrigation Innovators**

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P/N 700651 LIT-294 1/03

# PRO-SPRAY®

Models: **Shrub, 2", 3", 4", 6", 12"**  
 Inlet: **1/2"**

## FEATURES

- Models: Shrub, 2", 3", 4", 6", 12"
- Compatible with all female threaded nozzles
- Side inlet (SI) version available in 6" and 12"
- Innovative directional flush plug design
- Warranty period: 5 years
- ▶ Co-molded wiper seal
- ▶ Heavy-duty spring
- ▶ Industry's strongest spray body
- ▶ Innovative seal design
- ▶ Pro-Spray check valve

## OPERATING SPECIFICATIONS

- Operational pressure range: 15 to 100 PSI

## FACTORY INSTALLED OPTIONS

- Drain check valve (up to 10' of elevation)
- Check valve available on 4", 6", 12"
- Reclaimed water ID cap

## USER INSTALLED OPTIONS

- Drain check valve (up to 10' of elevation; P/N 437400SP)
- Reclaimed water ID cap (P/N 458520SP)
- Snap-on reclaimed cover (P/N PROS-RC-CAP)
- ▶ = *Advanced Feature descriptions on page 52*



### Pro-Spray Reclaimed

Pro-Spray models include optional factory-installed purple reclaimed caps



**PROS-00**  
 Retracted height: 1 1/2"  
 Inlet size: 1/2"



**PROS-02**  
 Retracted height: 4"  
 Pop-up height: 2"  
 Exposed diameter: 2 1/4"  
 Inlet size: 1/2"



**PROS-03**  
 Retracted height: 5"  
 Pop-up height: 3"  
 Exposed diameter: 2 1/4"  
 Inlet size: 1/2"  
 Shut-Off



**PROS-04**  
 Retracted height: 5 7/8"  
 Pop-up height: 4"  
 Exposed diameter: 2 1/4"  
 Inlet size: 1/2"  
 Shut-Off



[A] **PROS-06-SI**  
 [B] **PROS-06**  
 Retracted height: 8 3/4"  
 Pop-up height: 6"  
 Exposed diameter: 2 1/4"  
 Inlet size: 1/2"



[A] **PROS-12-SI**  
 [B] **PROS-12**  
 Retracted height: 16 1/8"  
 Pop-up height: 12"  
 Exposed diameter: 2 1/4"  
 Inlet size: 1/2"

## PRO-SPRAY® - SPECIFICATION BUILDER: ORDER 1 + 2

1 Models	2 Options
<b>PROS-00</b> = Shrub Adapter	<b>(blank)</b> = No option
<b>PROS-02</b> = 2" Pop-up	<b>CV</b> = Factory-installed drain check valve (Pop-up models only, 6" and 12" models ordered as CV will come as no side inlet)
<b>PROS-03</b> = 3" Pop-up	<b>CV-R</b> = Factory-installed reclaimed body cap (Shrub molded in purple)
<b>PROS-04</b> = 4" Pop-up	
<b>PROS-06-SI</b> = 6" Pop-up with side inlet	
<b>PROS-06</b> = 6" Pop-up (no side inlet)	
<b>PROS-12-SI</b> = 12" Pop-up with side inlet	
<b>PROS-12</b> = 12" Pop-up (no side inlet)	

### Examples:

- PROS-04 = 4" pop-up
- PROS-06 - CV = 6" pop-up, drain check valve
- PROS-12 - CV-R = 12" pop-up, drain check valve, reclaimed body cap

SPRAYS

**SPECIFICATION SUBMITTAL SHEET**



**APPLICATION**

Designed for installation on potable water lines to protect against backsiphonage of contaminated water into the potable water supply. Assembly shall provide protection where a potential health hazard exists.

**STANDARDS COMPLIANCE**

- ASSE® Listed 1020
- IAPMO® Listed
- CSA® Certified
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California

**FEATURES**

Sizes:  1/2"  3/4"  1"  1 1/4"  1 1/2"  2"

Maximum working water pressure 150 PSI  
 Maximum working water temperature 110°F  
 Hydrostatic test pressure 300 PSI  
 End connections threaded ANSI B1.20.1

**MATERIALS**

Main valve body Cast Bronze ASTM B584  
 Fasteners Stainless Steel, 300 Series  
 Elastomers Silicone (FDA approved)  
 Buna Nitrile (FDA approved)  
 Polymers Polypropylene (FDA approved)  
 Delrin® (FDA approved)  
 Springs Stainless Steel, 300 series

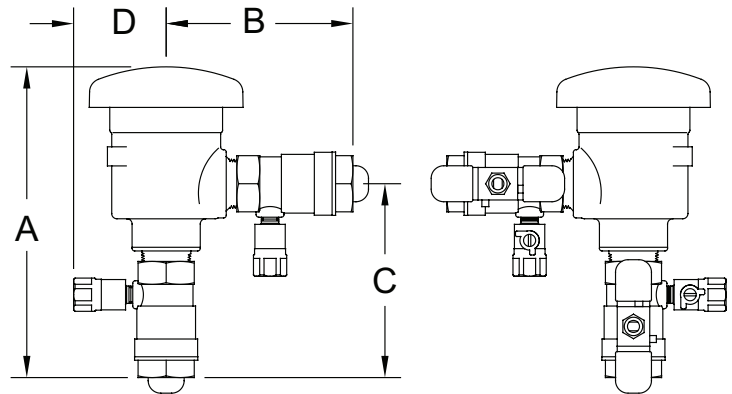
**OPTIONS**

(Suffixes can be combined)

- with full port QT ball valves (standard)
- L - less ball valves

**ACCESSORIES**

- Repair kit (complete)
- Water Hammer Arrester (Model 1250)
- QT-SET Quick Test Fitting Set

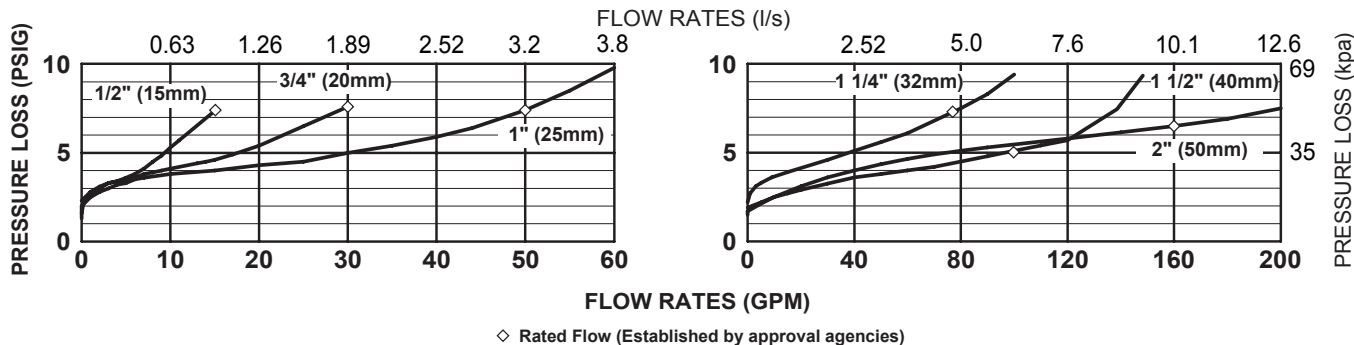


**DIMENSIONS & WEIGHTS (do not include pkg.)**

MODEL SIZE		DIMENSIONS (approximate)								WEIGHT			
		A		B		C		D		LESS BV		WITH BV	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	kg
1/2	15	7 1/8	181	4 1/16	103	4 1/4	108	2 1/4	57	4	1.8	6	2.7
3/4	20	7 3/16	183	4 5/16	110	4 5/16	110	2 3/8	60	4	1.8	6	2.7
1	25	7 3/4	197	4 5/8	117	4 3/4	121	2 5/8	67	4	1.8	8	3.6
1 1/4	32	11	279	7 7/16	189	7 7/16	189	3 1/8	79	14	6.4	20	9
1 1/2	40	10 1/2	267	7	178	7	178	3 1/8	79	14	6.4	20	9
2	50	11 1/16	281	7 9/16	192	7 11/16	195	3 1/8	79	14	6.4	26	10.4

## FLOW CHARACTERISTICS

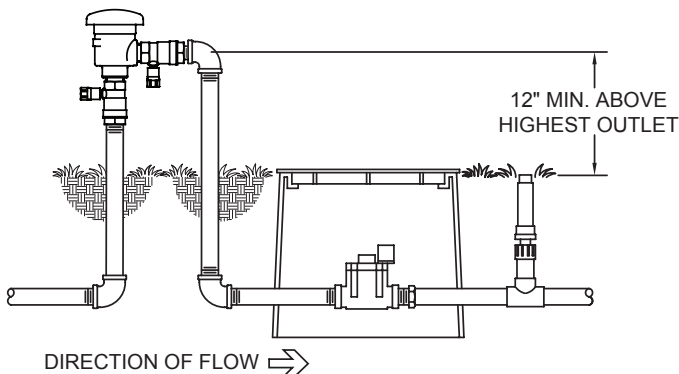
### MODEL 720A 1/2", 3/4", 1", 1 1/4", 1 1/2" & 2" (STANDARD & METRIC)



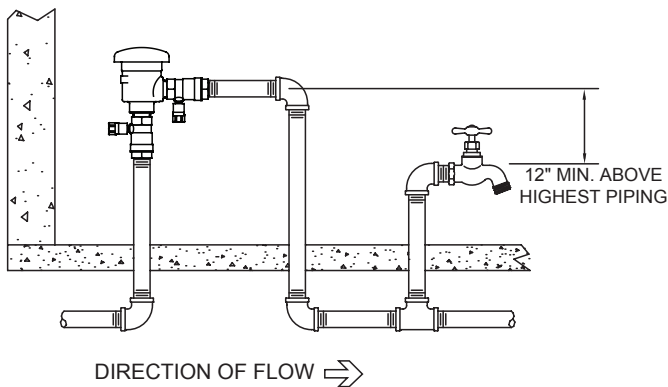
### TYPICAL INSTALLATION

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) above the highest piping or outlet downstream of the device. Install with adequate drain and sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged. A pressure vacuum breaker cannot be installed where back-pressure could occur or where spillage of water from vent could cause damage.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167



**OUTDOOR INSTALLATION**

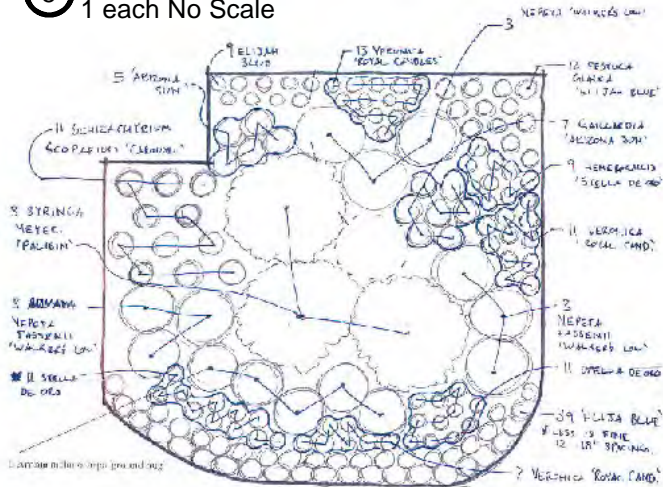


**INDOOR INSTALLATION**

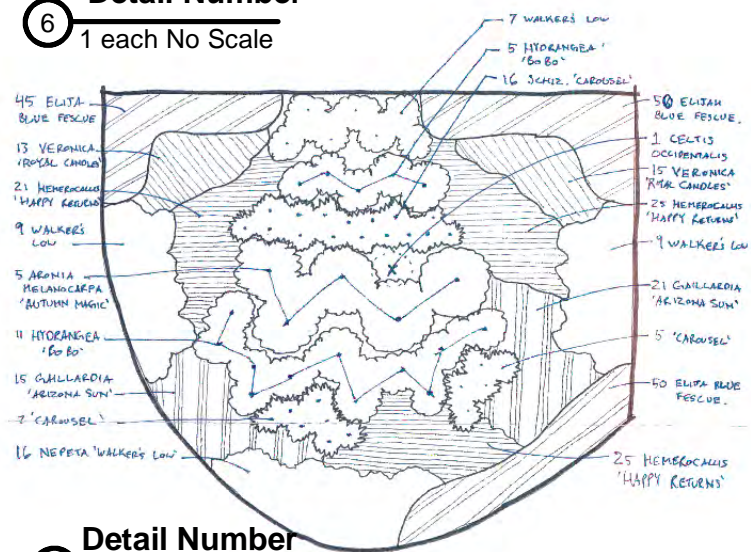
### SPECIFICATIONS

The Pressure Vacuum Breaker shall be ASSE 1020 approved, and supplied with full port ball valves. The main body and bonnet shall be bronze (ASTM B584), the loaded-air inlet shall use an silicone elastomer spring and seat disc. The entire assembly shall be accessible for maintenance and testing without removing the device from the line. The Pressure Vacuum Breaker shall be a WILKINS Model 720A.

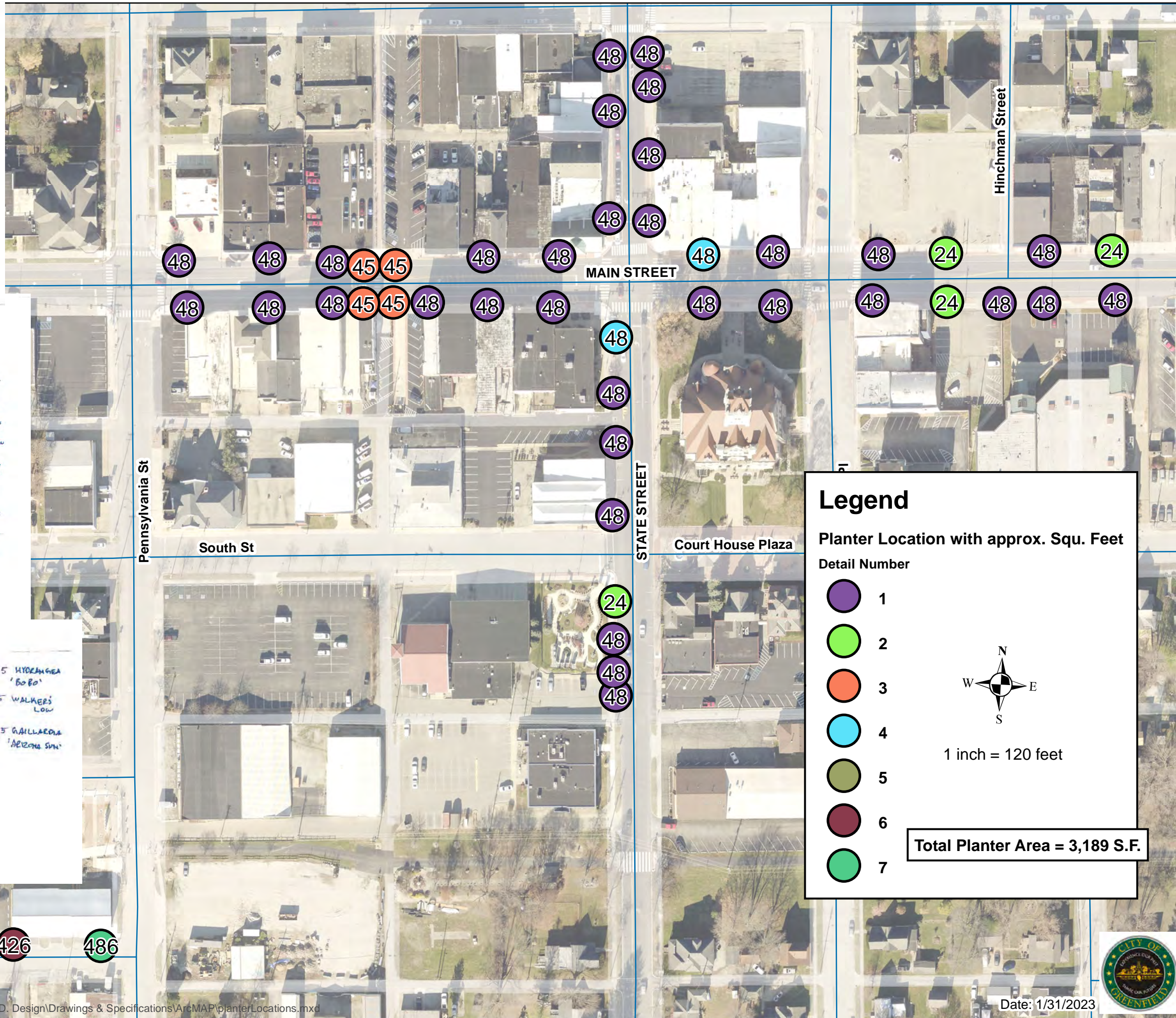
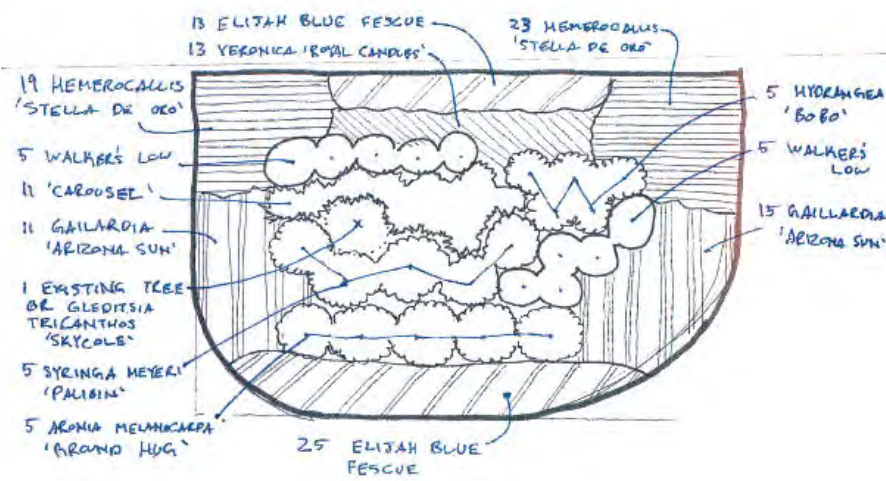
**5** Detail Number  
1 each No Scale



**6** Detail Number  
1 each No Scale



**7** Detail Number  
1 each No Scale

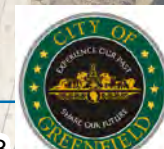


**Legend**  
Planter Location with approx. Squ. Feet  
Detail Number

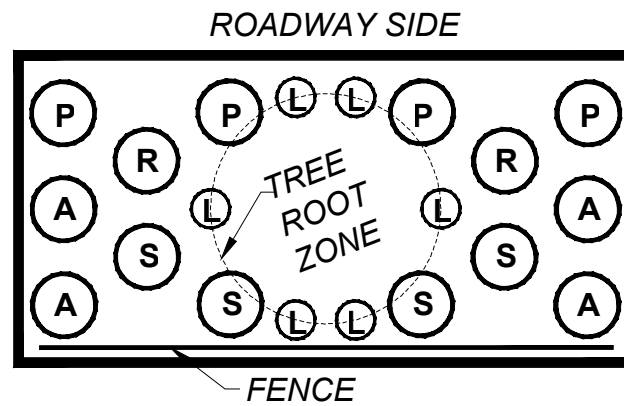
- 1
- 2
- 3
- 4
- 5
- 6
- 7

1 inch = 120 feet

**Total Planter Area = 3,189 S.F.**

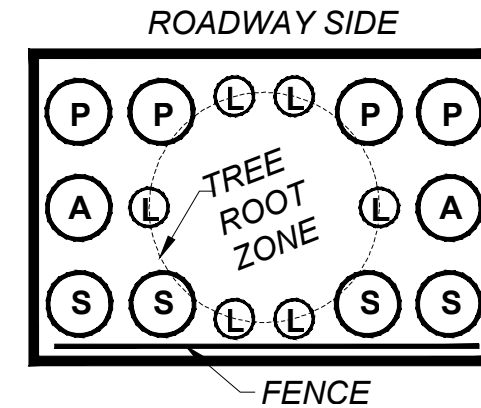


1 Detail Number  
33 each



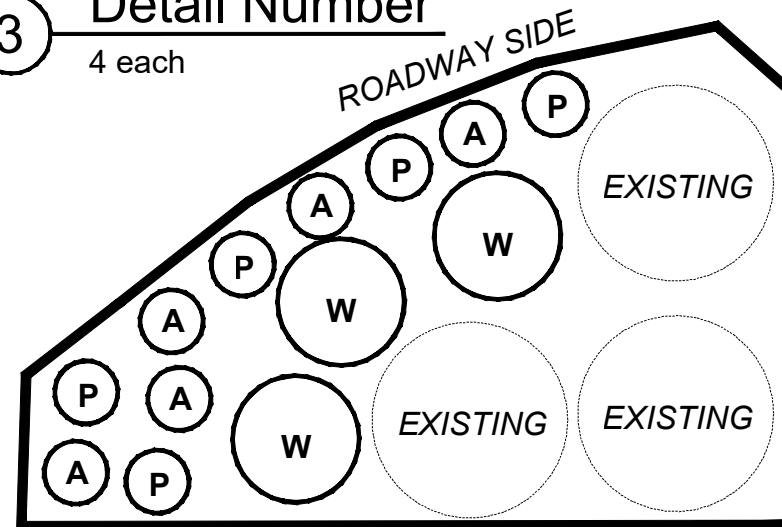
Quantity	Description	Common Name	Size
(A) 4	Gaillardia 'Arizona Sun' (grangiflora)	Arizona Sun Blanketflower	8"
(R) 2	Perovskia 'Lacey Blue™' PP20845	Lacey Blue Russian Sage	8"
(S) 4	Hylotelephium 'Pure Joy' Sedum (Rock'n Grow®) PP2194	Pure Joy Pink Stonecrop	8"
(L) 6	Lirope spicata	Creeping Lilyturf	8"
(P) 4	Hemerocallis 'Purple de Oro'	Purple de Oro Daylily	8"

2 Detail Number  
4 each



Quantity	Description	Common Name	Size
(A) 2	Gaillardia 'Arizona Sun' (grangiflora)	Arizona Sun Blanketflower	8"
(S) 4	Hylotelephium 'Pure Joy' Sedum (Rock'n Grow®) PP2194	Pure Joy Pink Stonecrop	8"
(L) 6	Lirope spicata	Creeping Lilyturf	8"
(P) 4	Hemerocallis 'Purple de Oro'	Purple de Oro Daylily	8"

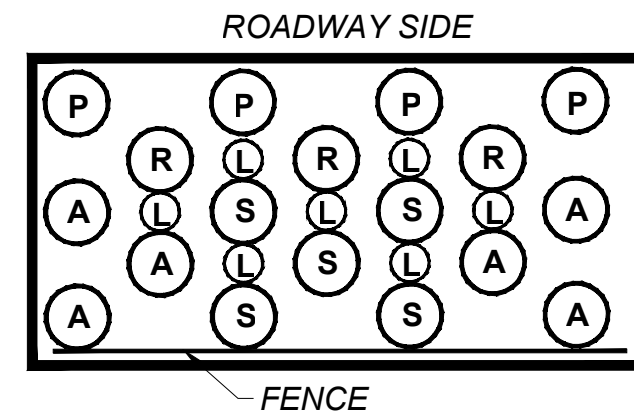
3 Detail Number  
4 each



Quantity	Description	Common Name	Size
(A) 5	Gaillardia 'Arizona Sun' (grangiflora)	Arizona Sun Blanketflower	8"
(P) 5	Hemerocallis 'Purple de Oro'	Purple de Oro Daylily	8"
(W) 3	Nepeta Fassinii 'Walkers Low'	Walkers Low Catmint	8"

NOTE: Remove all existing plant material except the 3 existing Spirea Shrubs in each bed, which shall remain.

4 Detail Number  
2 each



Quantity	Description	Common Name	Size
(A) 6	Gaillardia 'Arizona Sun' (grangiflora)	Arizona Sun Blanketflower	8"
(R) 3	Perovskia 'Lacey Blue™' PP20845	Lacey Blue Russian Sage	8"
(S) 5	Hylotelephium 'Pure Joy' Sedum (Rock'n Grow®) PP2194	Pure Joy Pink Stonecrop	8"
(L) 7	Lirope spicata	Creeping Lilyturf	8"
(P) 4	Hemerocallis 'Purple de Oro'	Purple de Oro Daylily	8"