The Walsh Design-Build Team
Walsh | Parsons | American Structurepoint | G. Stephens

VOLUME 1 | **ELECTRONIC COPY**

OPPORTUNITY CORRIDOR PROJECT 3

ATTENTION:
LETTING MANAGER

PROJECT 173000
PROJECT: CUY IR 490/SR 010 02.09/19.28
PID 96833

TECHNICAL PROPOSAL

SUBMITTED TO:
OHIO DEPARTMENT OF TRANSPORTATION
Division of Construction Management
First Floor, Mail Stop 5100
1980 West Broad Street
Columbus, Ohio 43223

SUBMITTED BY:
THE WALSH DESIGN-BUILD TEAM
1260 East Summit Street
Crown Point, Indiana 46307

TECHNICAL PROPOSAL
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EXECUTIVE SUMMARY

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Executive Summary

Opportunity Corridor Project 3 (OC3 or Project) presents an opportunity to revitalize, energize, and drive economic development for a forgotten community. The Walsh Design-Build Team will ensure success by engaging neighborhoods, residents, and businesses to complete this corridor project vital to Cleveland's future growth. Our team brings exceptional design, construction, and quality expertise to meet the Ohio Department of Transportation's expectations, along with an integrated diversity, inclusion, and outreach approach that will provide long-lasting benefits for the residents of Wards 4, 5, and 6, and for new, small, local, and EDGE (NSLE) firms.

Project Management. The Walsh Design-Build Team (Walsh DBT) is an integrated team with a record of success on landmark projects similar to OC3. Each member firm will leverage its capabilities, experience, and resources for efficient Project delivery.

Walsh Construction Company II, LLC (Walsh)
Lead Contractor
KEY PERSONNEL: John Tracy, Mark Hedrick, Scott Febus, Brenda Wolf

Parsons Transportation Group, Inc. (Parsons)
Lead Designer
KEY PERSONNEL: Tom Gandolfi, Robert Ballard, Ken Wells

American Structurepoint, Inc. (American Structurepoint)
Independent Quality Firm
KEY PERSONNEL: David Johansen

G. Stephens, Inc. (GSI)
Diversity, Inclusion, and Outreach Consultant
KEY PERSONNEL: Halle Jones Capers

Our team will work with the Ohio Department of Transportation (ODOT), the City of Cleveland, Norfolk Southern, Greater Cleveland Regional Transit Authority (GCRTA), utilities, third parties, and stakeholders to provide a strong partnering relationship through:

The Right Staff. Walsh DBT Key Personnel were selected for their technical expertise and proven ability to communicate, cooperate, and collaborate. Further, we have identified and committed additional staff needed for a timely start of design and construction.

No Surprises. The Walsh DBT understands that an effective relationship with all parties must be based on a "no surprises" approach, which includes frequent and transparent communication.

Effective Planning and Coordination. The Walsh DBT will work with ODOT, the City, third parties, and stakeholders to plan and coordinate all aspects of the Project so that we know from the beginning how to get to Project completion, while always upholding the highest quality and safety standards.

Design. Our design team is composed of qualified Key Personnel and Discipline Lead Engineers to deliver constructible, high quality, on-time design. The same team that developed the design for this Technical Proposal will continue in their roles after award. This continuity gives our team the ability to quickly get to work since these professionals already know the Project, the community, and ODOT's expectations.

The Walsh DBT has incorporated three alternative technical concepts and eleven other design optimizations and refinements. These improvements provide benefits to the Project schedule, constructibility, maintainability, durability, and sustainability. We address OC3's complex drainage and utilities in our design approach and developed a 3D model to further identify locations and verify that our design addresses any conflicts.

Construction. As a national design-build contractor, Walsh has constructed some of the most iconic urban transportation infrastructure in the Midwest and brings a proven track record and substantial resources to bear on OC3. With a workforce familiar with Cleveland from our experience constructing Innerbelt CCG1 and an equipment fleet valued at over $575 million, the Walsh DBT has the resources needed to successfully construct the Project.

Our efficient construction plan is divided into five segments and identifies the critical path to achieve early substantial completion by October 1, 2021. The plan incorporates a site-specific safety and quality strategy to keep the public and our crews safe while we deliver a high-quality facility for the community and ODOT.

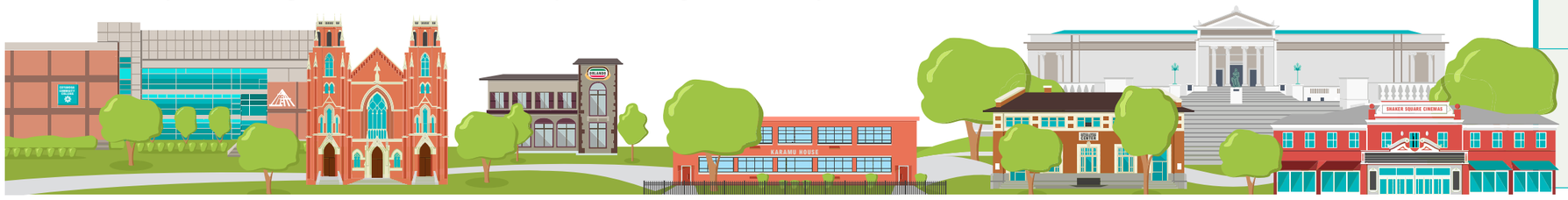
Diversity, Inclusion, and Outreach. The Walsh DBT's diversity, inclusion, and outreach efforts are led by GSI, an EDGE/DBE/SBE certified firm that understands first-hand the challenges faced by NSLE businesses. During the pursuit, we solicited over 500 NSLE firms and hosted outreach events to identify potential subcontractors and spark interest in the Project. We also met individually with over 50 firms to discuss Project opportunities. We commit to exceeding NSLE, workforce, and on-the-job training goals.

Walsh DBT members attended local Neighbor Up meetings to better understand the needs of the residents of Wards 4, 5, and 6 and local businesses. This is ultimately their Project, and a thorough understanding of these needs and interests is vital to fulfilling the promise of the Opportunity Corridor. Our staff was warmly received by the community, further reinforcing the Walsh DBT's desire to deliver a high quality Project.

The Walsh DBT identifies significant benefits to ODOT throughout this Technical Proposal with the Walsh DBT plus icon and (+).

Walsh DBT's Summary of Benefits to achieve ODOT's OC3 Project Goals.

Deliver the Project at or below budget	+ Implement ATCs and design innovations to provide best value for cost + Develop and implement a Risk Management Plan to ensure all risks are monitored, mitigated, and controlled
Deliver a positive economic impact to the community through Diversity and Inclusion efforts	+ Exceed OJT goals with 22,000 Type 1 hours and 11,000 Type 2 hours + Implement a comprehensive plan for OJT and workforce development + Implement comprehensive plan for community outreach and engagement
Maximize team diversity by the inclusion of the maximum available firms usefully utilized	+ Exceed NSLE goals with 2.1873% New, 2.2964% Small, 6.3624% Local, and 22.2939% EDGE participation + Mentor four firms (two design and two construction)
Maximize quality, meeting or exceeding applicable standards in all areas	+ Commit additional IQF personnel who will co-locate for efficient reviews + Implement quality management plan based on past successful plans + Maintain quality independence from production for design and construction + Empower all employees with stop-work authority for safety or quality issues
Minimize duration of traffic impacts and open all roadways to traffic by November 1, 2021	+ Achieve substantial completion by 10/1/2021, 31 days ahead of schedule + Use an integrated design-build schedule that supports early initiation of design for critical construction activities and long-lead items
Meet or exceed aesthetics and sustainability guidelines	+ Achieve INVEST Silver + Assign an experienced EDGE-certified firm, the Construction Green Team, and Sustainability Manager Margaret Hewitt to track sustainability efforts
Deliver the Project with zero lost-time incidents	+ Assign an experienced Safety Manager, Michael Axton, to oversee safety + Stress safety in community outreach + Implement successful safety programs + Coordinate with ODOT and emergency services + Empower all employees with stop-work authority for safety or quality issues
Demolish existing residences and commercial structures ASAP	+ Use experience from past projects including Innerbelt CCG1 to expedite building demolitions + Assign qualified staff to coordinate activities with ODOT, the City, utilities, and demolition contractor



A. PROJECT MANAGEMENT

The Walsh Design-Build Team
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Part A. Project Management

The Walsh DBT is ready to partner with ODOT, the City of Cleveland, local communities, and key stakeholders to successfully deliver OC3. The Project's overarching goal is to unlock the economic potential within this historically under-served area by improving system linkage and mobility for the local residents, business community, and traveling public. We understand that to achieve this goal, our design-build team must plan every detail of the Project and deliver on that plan to enhance opportunities for local residents, businesses, and community.

Management Approach

Developed and refined over 20 years of delivering complex design-build projects, the Walsh DBT's integrated management approach unites people, systems, business structures, and proven practices into a dynamic process that combines the talents and insights of all Project participants throughout the life of a project. The Walsh DBT will use this approach to develop a Project Management Plan (PMP) for OC3 that integrates design and construction and incorporates best practices and lessons learned from all Walsh DBT members.

The PMP includes all of the procedures required to manage the Project, with roles and responsibilities clearly defined. We plan all work, communicate the plan, and continuously update the plan as part of our "no surprises" approach (**Figure A.1**).

Design-Build Team Internal Interfaces

The Walsh DBT has been working as an integrated team during this pursuit and will continue to do so through all Project phases to provide a unified design, construction, quality, safety, and diversity, inclusion, and outreach (DIO) approach. Design-build projects operate best with open communication among all members of the team. The Walsh DBT will use the following interface methods to encourage collaboration and issue resolution at the lowest possible levels:

Co-Located Staff: A project of this size and complexity takes a collaborative and integrated effort that includes both co-located and off-site staff. Allowing for daily face-to-face interaction between design, construction, quality, DIO, and ODOT personnel, the co-located office improves communication and cooperation, and expedites the decision-making process for fast-tracked design-build projects. The Walsh DBT will implement the following added-value co-location strategies to maximize effectiveness:

- Establish a co-located office within two miles of the Project and in Wards 4, 5, or 6 to give us quick access to the Project site and allow better communication with the community.
- In addition to personnel required to be co-located, design leads for structures and roadways, Robert Ballard and Ken Wells, and their IQF counterparts, Chris Bettinger and Bruin Ramsdell, will be co-located during design for efficient coordination of design and reviews.
- Integrate off-site design, IQF, and DIO staff through regularly scheduled in-person meetings and the use of collaborative technology, such as video conferencing, ProjectWise, and SharePoint.

Coordination Meetings: Coordination meetings (**Figure A.2**) provide the setting to review design and construction progress, DIO efforts and needs, quality and safety successes and deficiencies, schedule progress, and big picture planning. ODOT, the City of Cleveland, third parties, and key stakeholders will be invited to the appropriate meetings to ensure transparency, collaboration, and communication.

Task Forces: To facilitate the internal operations of the team, we have established Task Forces that have been working together during the pursuit. Each Task Force (Structures, Roadway, Drainage/Utilities, and DIO) includes staff leads from the design, construction, IQF, and DIO sub-organizations. After award, we will continue to collaborate through these groups.

Design-Build Coordination: Early and frequent collaboration between construction and design leads will be facilitated by DB Coordinator Matt Filipowski. Formal constructibility reviews with construction and IQF staff will be conducted with the design leads prior to release for construction (RFC) plans. Matt will work with DB Design Project Manager Tom Gandolfi, DB Utilities/Rail/City Coordinator Mark

Figure A.1 The Walsh DBT "No Surprises" Project Management Approach.

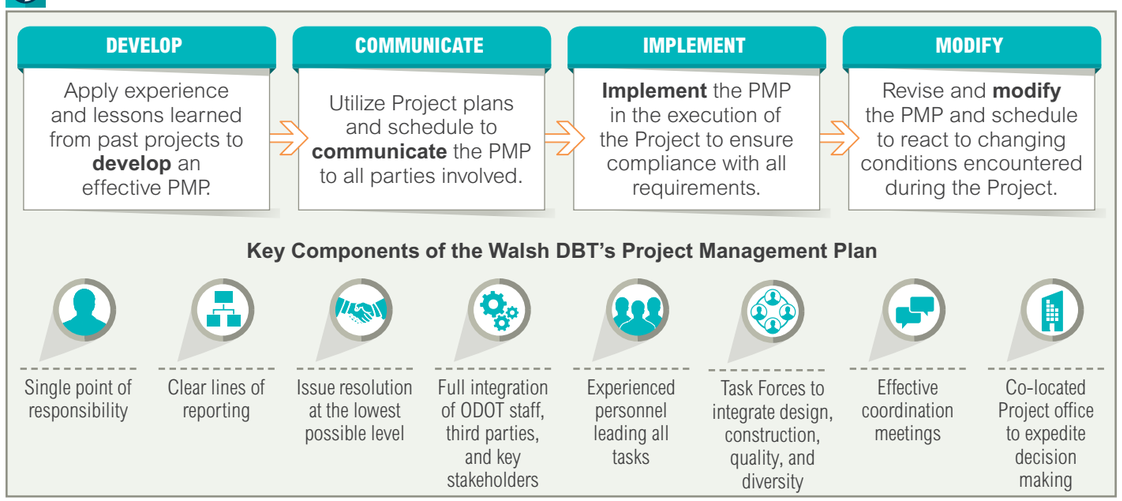


Figure A.2 Major Team Internal Coordination Meetings

Integrated coordination meetings will provide a foundation for interfaces between all internal Walsh DBT sub-organizations. While considered "internal" coordination meetings, the Walsh DBT will encourage ODOT participation.

● Lead ◉ Participant ○ As needed

	MEETING	FREQUENCY	PROJECT MANAGEMENT: DB Project Manager	DB Rail/Utilities/City Coordinator	Public Information Point of Contact	DB Coordinator	Project Scheduler	Safety Manager	DIO: DB D/O Lead Manager	Contractor D/O Lead Manager	Diversity/Outreach Staff	QUALITY: Design IQF Project Manager	DB Design QC Manager	DB Construction QC Manager	DESIGN: DB Design Project Manager	Deputy Design Manager	Discipline Lead Engineers	CONSTRUCTION: DB Construction Project Manager	Construction Leads	General Superintendent	Foreman	Lead MOT Manager	Subcontractors
1	Executive Committee	quarterly	●	○				○	○			○	○	○	○	○		○					
2	Leadership Committee	bi-weekly	●	◉	○	○	○	◉	◉	○	○	◉	○	○	◉	○	○	◉	○	○			○
3	Schedule Status	bi-weekly	◉	◉	○	○	●	○	○			◉		○	◉	○		◉	◉	○		○	○
4	Utility Coordination	weekly	○	●	○	○	◉	○	○			○			◉	○	○	○	◉	○			○
5	Rail Coordination	weekly	○	●	○	○	◉	○	○			○			◉	○	○	○	◉	○			○
6	Design Task Forces	weekly	○	◉	○	◉	◉	○	◉	○	○	◉	◉	◉	●	●	●	○	◉	○			○
7	DIO Task Force	weekly	◉	○	◉	◉	○	○	●	◉	◉	○	○	○	◉	○	○	◉	○	○			○
8	Subcontractor Coord.	weekly	○	○			○	○	◉	○	○			◉				◉	◉	●	○	◉	◉
9	Progress Meeting	weekly	●	◉	◉	◉	◉	○	◉	○	○	◉	○	○	◉	○	○	◉	○	○		○	○
10	Quality Status	weekly	◉	○		◉	○	○	○			●	◉	◉	◉	○	○	○	◉	◉	○	○	○
11	Toolbox Talks	weekly	◉	◉		◉	◉	◉						◉				◉	◉	●	◉	◉	○
12	Task Hazard/Quality	daily	○	◉			◉	◉						◉				◉	◉	◉	●	◉	◉

Hedrick, DB Construction Project Manager Scott Febus, and Design IQF Project Manager (DIQFPM) David Johansen, to assess the design for constructibility, coordinate with construction to determine critical design needs, and provide construction knowledge to design.

Leadership Committee: We will jointly address challenges through our Leadership Committee. This committee will be led by DB Project Manager John Tracy, and include all Key Personnel. At bi-weekly meetings, the Leadership Committee will review and address critical issues or questions arising from Task Forces and other sources. John will then provide direction for immediate project team action and implementation.

Executive Committee: During quarterly meetings, John will report Project status to the Executive Committee composed of senior-level leadership from each of the core Walsh DBT member firms (Walsh, Parsons, American Structurepoint, and G. Stephens). The committee will review schedule, DIO, and staffing requirements, oversee safety and quality, and make decisions if issues cannot be resolved at lower levels.

Subconsultants and Subcontractors: Engineering staff from subconsultant firms, including those that are new, small, local, or EDGE (NSLE), will participate in Task Forces as fully integrated members of our team. The Walsh DBT will also treat all subcontracted work the same as our own. Each subcontractor will be assigned a Walsh DBT manager who will oversee the subcontractor's work, distribute information regarding plan updates, coordinate and review shop drawings, and process required quality control documentation. Subcontractors will be included in coordination meetings and planning sessions with their schedules incorporated into the CPM Project Schedule. Subcontractors will be held to the same safety, quality, and environmental standards as the Walsh DBT.

Diversity, Inclusion, and Outreach Plan (DIOP) Integration: Each Walsh DBT member firm has prioritized DIO efforts by participating in pre-bid outreach and working with subcontractors and subconsultants. Our DIO team, including Halle Jones Capers and Brenda Wolf, will work closely with the entire Project team to further develop and implement our DIOP, including efforts for NSLE business development, workforce development, and community outreach. The DIO team will assist the Project team in outreach, mentoring, and training, and facilitate monthly check-ins for each NSLE firm to discuss the Project and their participation. The DIO team will measure and report DIO progress to the DB Project Manager, ODOT, the Leadership Committee, and the DIO Task Force.

Design-Build Team Interface with ODOT

The Walsh DBT will coordinate with ODOT in a continuous and effective manner for every aspect of the Project—design, construction, quality, safety, and DIO (**Figure A.3**). We will use the following methods to enhance our interfaces with ODOT:

- **Partnering:** We will hold a partnering kickoff meeting with a mutually-approved facilitator upon award and continue with quarterly meetings during the Project. The Walsh DBT will invite ODOT, the City of Cleveland, third parties, stakeholders, and key subcontractors to be involved in the partnering effort. Together, we will develop and establish a partnering charter with mutual acceptance, commitment, and accountability.
- **Face-to-Face Communication:** Our partnering approach will be enhanced through face-to-face interactions using co-location to foster a team approach. We will use our experience from Innerbelt CCG1 and the Ohio River Bridges Projects that were successfully co-located to maximize the benefits of this interface approach.
- **Coordination Meetings:** ODOT and its representatives will have early and frequent involvement through over-the-shoulder design reviews and weekly Project meetings. We encourage ODOT's attendance at the various Walsh DBT coordination meetings to establish a "no surprises" approach in the development of the Project.
- **Document Control:** The Walsh DBT will use SharePoint, which we understand to be ODOT's preferred document control system, for document storage and electronic submittals.

Design and Construction Quality

The Walsh DBT shares ODOT's goal of maximizing quality to meet or exceed applicable standards in all areas. We will achieve this goal in design and construction by defining the quality requirements and providing the necessary controls and procedures. The Walsh DBT's PMP will incorporate a project-specific Quality Management Plan (QMP) for design and construction quality founded on the following principles:

The Walsh DBT will follow the QMP to systematically deliver quality in design and construction (**Figure A.4** on the following page). The QMP will define design and construction quality control (QC), verification, and quality assurance (QA) procedures to be performed according to the Project provisions. The QMP will also:

- Define the specific processes and procedures for managing quality during design and construction
- Identify who is responsible and accountable for specific procedures at each phase
- Specify methods for documenting quality processes and results
- Provide guidelines for taking preventive actions and steps for corrective action, if required

The design quality components of the PMP will outline roles and responsibilities for the design team and the IQF, and detail specific procedures for conducting and documenting the design quality process, including Task Force meetings, interdisciplinary reviews, constructibility reviews, and QA audits. The Walsh DBT's Draft Design Quality Components of the PMP are provided in **Part F.12**.

Figure A.3 Interfaces with ODOT.

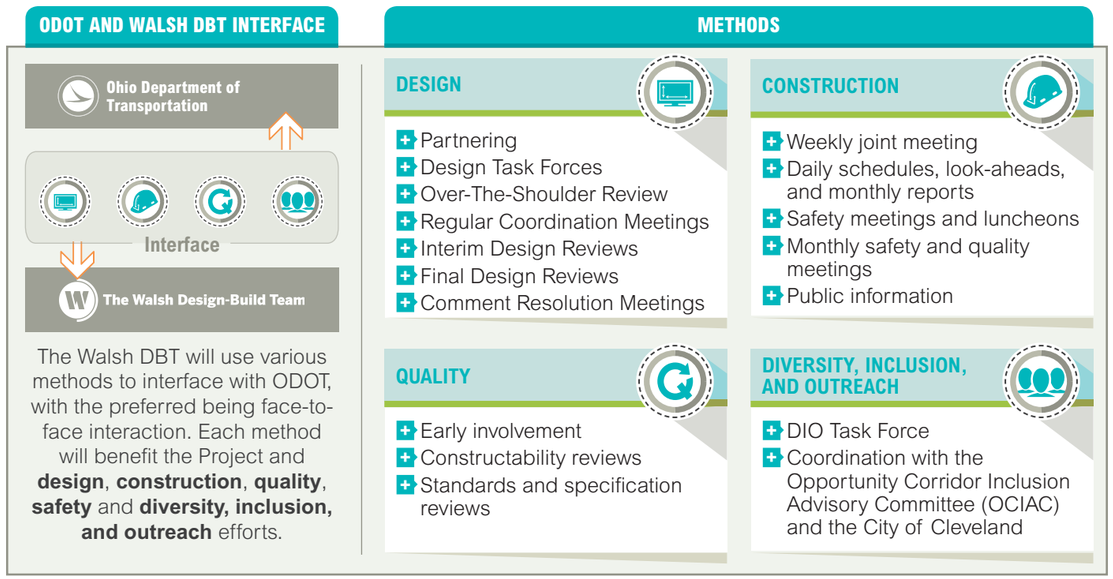


Figure A.4 Ensuring Design and Construction Quality.

WALSH DBT QUALITY PRINCIPLES

Quality is integral to everything we do; our QMP incorporates all design and construction activities	We prioritize quality above schedule and production, matching safety as our two highest priorities	We emphasize the importance of transparent communication and thorough documentation	All employees are empowered with the authority to stop work when needed to review quality concerns

DESIGN QUALITY CONTROL • QUALITY DESIGN TO REDUCE REVIEW COMMENTS AND ACCELERATE THE RFC PROCESS

Leadership

- Tariq Masud, Design QC Manager, brings 22 years of experience serving in the design QC role
- Direct reporting to the Executive Committee ensures Design QC independence from production
- Parsons is ISO 9001:2008 certified and will uphold those standards in the control of design production processes and work products

Method to Address

- Invite ODOT to over-the-shoulder reviews and interim/final design reviews
- Implement a four-step plan to manage design QC (Plan, Act, Check, Excel)
- Complete comprehensive, discipline-specific checklists as part of the QC documentation for all design submittals
- Verify that all submittal packages include formal evidence of QC checking and effective comment resolution
- Perform interdisciplinary and constructibility reviews at agreed-to stages of design development
- Check design plans against design calculations and that comments of all involved agencies from previous reviews have been addressed and implemented in the issued design products
- Audit quality documentation for each design package before issuance for review or construction

INDEPENDENT DESIGN QUALITY ASSURANCE • ASSURANCE THAT DESIGN MEETS OR EXCEEDS APPLICABLE STANDARDS

Leadership

- David Johansen, DIQFPM, brings over 33 years of experience on the design and construction of large-scale transportation projects
- Chris Bettinger, Design IQF Structural Lead;16 years of experience
- Bruin Ramsdell, Design IQF Roadway Lead; 16 years of experience

Method to Address

- IQF Roadway and Structural Leads attend over-the-shoulder reviews along with DIQFPM to remain current on design progress and recognize and correct any noncompliance issues
- Check each design submittal for completeness and compliance; then distribute to appropriate discipline lead for review
- Perform technical reviews of submittals to verify compliance with all contract document requirements, design criteria, standards, and specifications of all agencies and stakeholders
- Compile discipline lead reviews and verify completeness, reconcile any conflicting comments, and resolve any quality issues prior to distribution to agencies
- Maintain records of deliverable reviews, standards, software validation, and approved contract deviations, as well as meeting minutes of over-the-shoulder reviews, submission meetings, and comment resolution meetings

CONSTRUCTION QUALITY CONTROL • MAXIMIZE QUALITY PRODUCT WITH A LONG, USEFUL SERVICE LIFE

Leadership

- Luke Wilson, Construction QC Manager, brings 12 years of experience in this role
- Direct reporting to the Executive Committee ensures Construction QC independence from production
- Walsh is an AISC-Advanced Certified Steel Erector and upholds the highest quality standards

Method to Address

- Implement three-phase control plan to manage construction quality (pre-plan, inspect, follow-up)
- Develop work plans to detail specific areas of work and the applicable specification and testing requirements
- Conduct pre-activity meetings for all major features of work
- Perform detailed testing, inspection, and monitoring to ensure Project requirements are achieved
- Provide tablets to all field supervision for access to the latest plans
- Conduct internal auditing, training, and management reviews for continuous improvement
- Collect and preserve quality documentation
- Regular communication and coordination with ODOT's QAM
- Daily and weekly schedule coordination with DB Construction Project Manager and Project Scheduler to prevent quality issues

Organization Chart

The Walsh DBT has identified responsibilities and authority for each member firm and personnel position. Since the Walsh DBT is led by a single firm, all lines of reporting and decision making come from a common entity, which streamlines communication. Our firm organization chart (**Figure A.5**) shows the contracting relationships within the Walsh DBT.

All personnel were selected for their technical expertise and proven ability to communicate, cooperate, and collaborate. Many of these individuals have been working within the integrated design-build team during this pursuit and will continue to partner with ODOT during Project development to provide continuity and consistent application of ODOT's priorities. Our personnel organization chart is shown in **Figure A.6**.

Figure A.5 Walsh Design-Build Team Organization Chart. The Walsh DBT is well organized with clearly defined roles and responsibilities. Each firm has committed experienced personnel to lead all tasks.

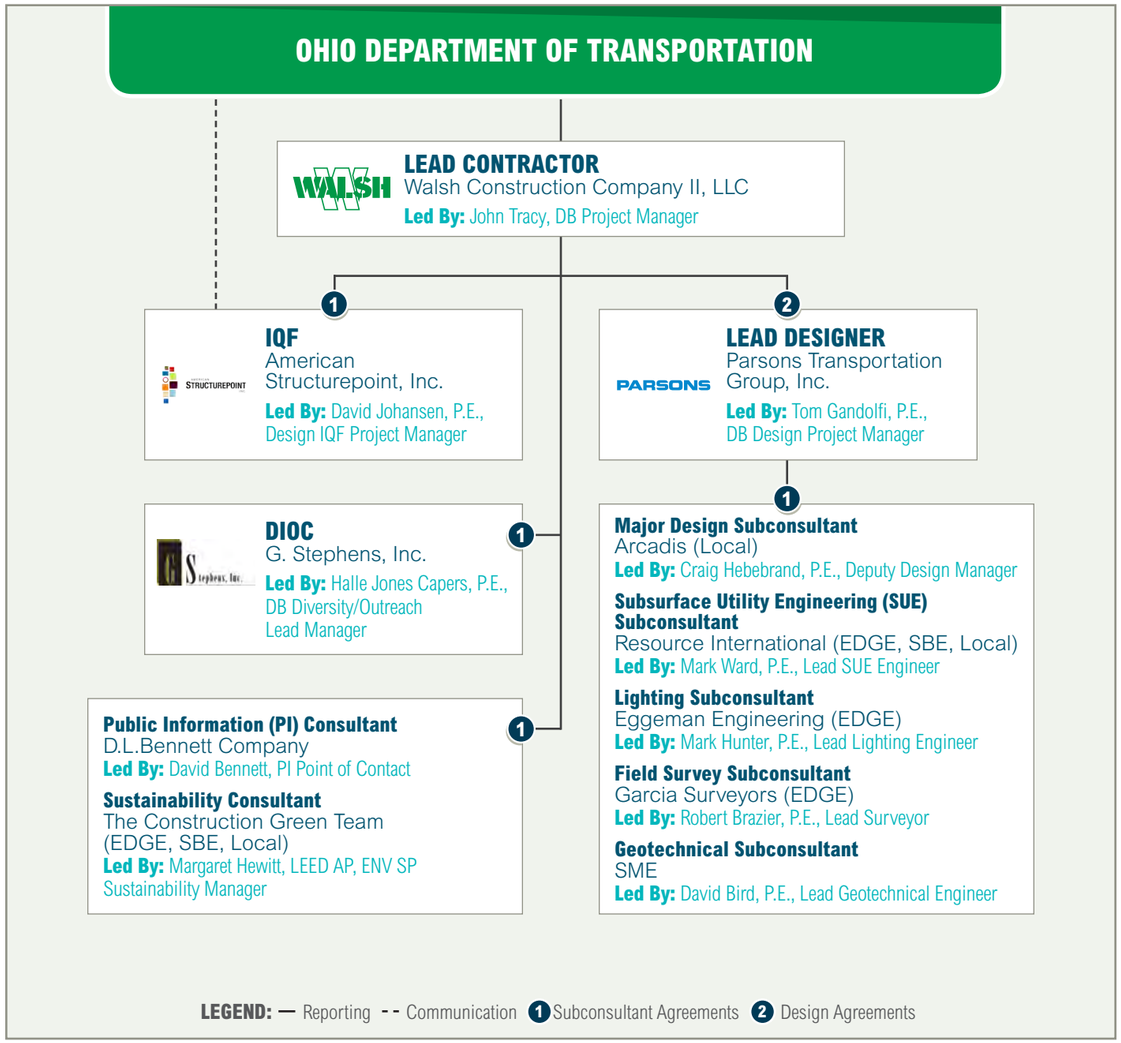
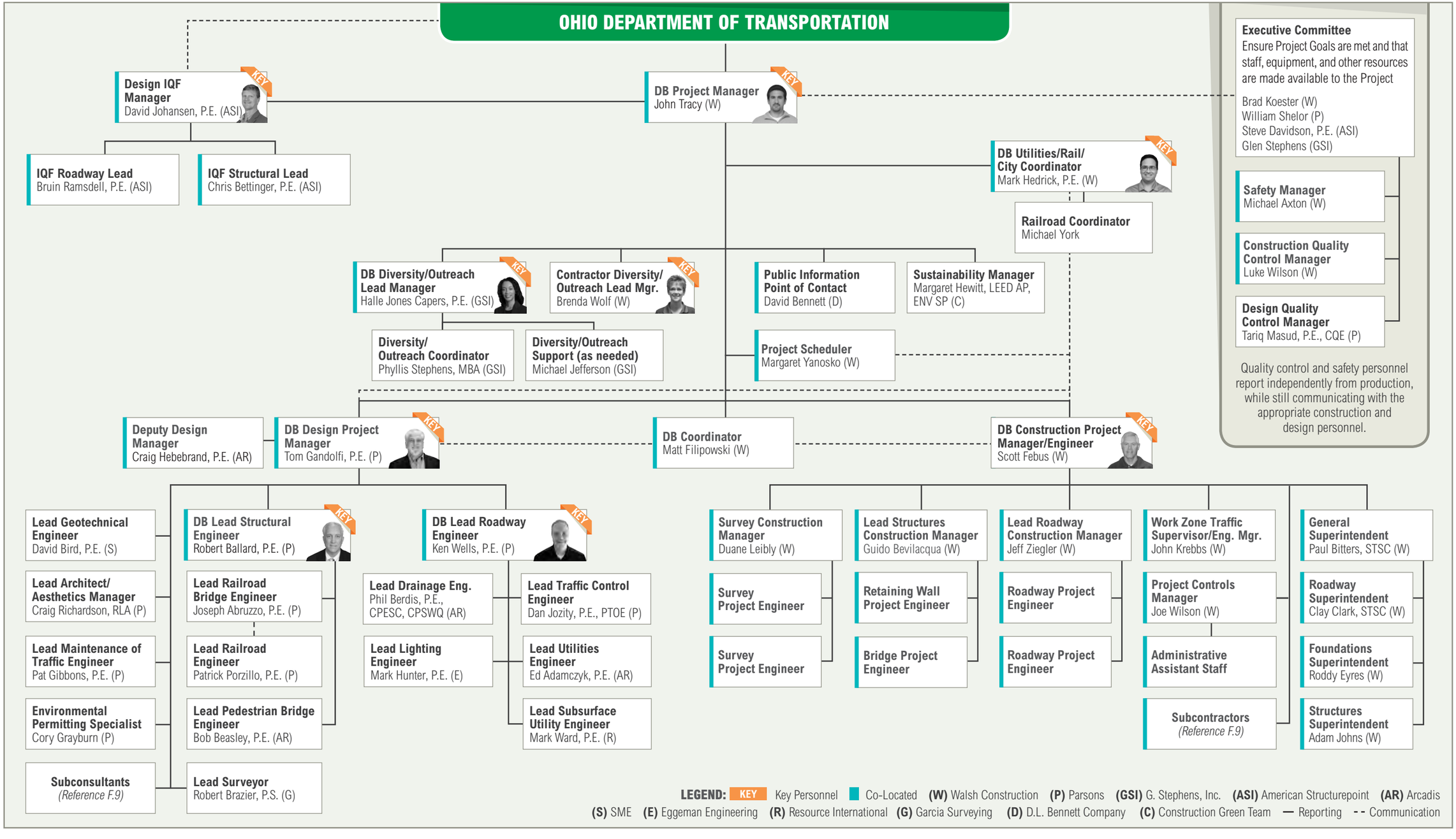


Figure A.6 Walsh Design-Build Team Organization Chart. Our personnel organization was created to respond specifically to OC3's Major Work Tasks. This team has been working together to develop this Technical Proposal. Many of our Key Personnel met with ODOT during the One-on-One Meetings and will carry through ODOT's priorities after award for successful Project delivery.



Design and IQF Staffing

Timely initiation of design and construction sets the pace for subsequent work critical to achieving on-time substantial completion. The same team that led the development of this Technical Proposal will deliver OC3 upon award. This team includes Tom Gandolfi, Craig Hebebrand, and David Johansen. Their involvement provides continuity and consistency for design delivery and ensures a timely startup upon award.

The Walsh DBT has identified required design activities and their associated conditions, constraints, and inter-dependencies. Using this information, we have created a detailed design schedule that is feasible from a staffing perspective and accounts for the design process, including:

- Design effort and coordination
- All interdiscipline constraints and reviews
- Constructibility reviews
- Checking/quality control
- IQF and ODOT reviews
- Comment resolution and revisions
- Buildable units

This design schedule has been incorporated in our design-build CPM Project Schedule with design completion dates aligned with the start of construction activities. Design staffing will be based on the level of effort required for each activity and the time allowed to complete the design process. Design staffing for post-design will be based on the Walsh DBT submittal/shop drawing schedule and by assigning leads to respond to requests for information and other construction-related matters.

IQF staffing is also based on the mutually-developed CPM Project Schedule and will be assessed through regular communication between David and Tom. While IQF staffing needs remain fairly constant throughout the design of the Project, the Walsh DBT will be prepared to increase staffing during peak periods to accommodate design submittals as scheduled.

Each week during the schedule status meeting, the schedule will be reviewed to monitor staffing needs for the short-term, mid-term, and long-term. If staffing needs should escalate beyond the assigned staff's capacity, Executive Committee members, William Shelor of Parsons and Steve Davidson of American Structurepoint, will allocate additional resources from local design and IQF personnel (**Figure A.7**). Before working on the Project, all staff will be familiarized with the Project and trained in the PMP and contract requirements.

Coordination with Third Parties and Stakeholders

Third-party and stakeholder coordination will be one of the most significant tasks to keep the Project on schedule. DB Rail/Utilities/City Coordinator Mark Hedrick will lead this effort, with support from Railroad Coordinator Michael York and design and construction discipline leads, to incorporate schedule, design, and construction requirements. Mark will track all coordination activities, maintain the Utility Matrix, and communicate progress to the DBT, third parties, and stakeholders. This interface approach with third parties and stakeholders is summarized in **Figure A.8**.

Coordination with Third Parties: Immediately after award, Mark will schedule a partnering workshop to discuss the PMP and share the schedule and sequencing of the various buildable units. Workshop participants will review known and potential impacts to Norfolk Southern, Greater Cleveland Regional Transit Authority (GCRTA), and utilities and discuss opportunities to avoid or minimize those impacts. At the workshop, we will confirm subsequent post-workshop coordination activities, including coordination meetings, pre-submittal meetings, submittals, reviews, and approvals.

Figure A.8 Third Party and Stakeholder Interfaces. We understand third party and stakeholder coordination will be one of the most significant tasks to keep the Project on schedule. We will use multiple approaches to interface with these groups. Like our internal coordination meetings, we encourage ODOT participation in these interfaces.

● Third Party and/or Stakeholder

INTERFACE APPROACH	THIRD PARTY									STAKEHOLDERS							
	CLE Engineering & Construction	CLE WPC/NEORSD	CLE Water Department	CLE Public Power	CLE Police, Fire, and EMS	GCRTA Bus Operations	GCRTA Rail Operations	Norfolk Southern	Private Utilities	Permitting Agencies	Community Development Corps	Businesses	Residents	Institutions	Schools	Churches	Recreation & Community Centers	Social Service Providers
1 Partnering Workshop	●	●	●	●	●	●	●	●	●	●								
2 Introductory Meeting					●	●				●	●	●	●	●	●	●	●	●
3 Utility Matrix		●	●	●			●	●	●									
4 Utility Coordination		●	●	●			●	●	●									
5 Rail Coordination							●	●										
6 Design Task Forces	●	●	●	●	●	●	●	●	●									
7 3D Modeling	●	●	●	●														
8 Pre-Submission	●	●	●	●			●	●	●									
9 Field Verification	●	●	●	●			●	●	●									
10 Detour Maps					●	●				●	●	●	●	●	●	●	●	●
11 One-on-One Meetings	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
12 Progress Updates					●	●				●	●	●	●	●	●	●	●	●

INTERFACE APPROACH DESCRIPTIONS

1 Partnering Workshop scheduled immediately after authorization to provide an overview of the Project and establish lines of communication.

2 Introductory Meeting scheduled immediately after authorization to provide an overview of the Project and establish lines of communication.

3 Utility Matrix continuously updated and maintained to document the status of all utility facilities within the Project limits.

4 Utility Coordination Meetings to discuss Project issues and needs; review utility efforts and schedule; and evaluate coordination effectiveness.

5 Rail Coordination Meetings to discuss issues and upcoming needs; review coordination efforts and schedule; and evaluate coordination effectiveness.

6 Design Task Forces to report design progress; discuss interdisciplinary efforts and needs; perform constructibility and over-the-shoulder reviews.

7 3D Modeling of the subsurface facilities developed during the pursuit will be updated as the Project progresses and used to improve coordination.

8 Pre-Submission Meetings held prior to submitting plans or permit requests to confirm requirements, expectations, and schedule are incorporated.

9 Field Verification Meetings held as necessary to verify existing and proposed facility locations.

10 Detour Plans continually updated and provided in multiple formats for stakeholders.

11 One-on-One Meetings scheduled with stakeholder groups to discuss individual needs.

12 Progress Updates coordinated with ODOT to provide consistent and timely messaging.

Figure A.7 Depth and Source of Available Staffing. The Walsh DBT is confident we have adequate design and IQF staff assigned to the Project. However, a strength of our team is our ability to draw from additional staff, if necessary to achieve the schedule and maintain quality management.

Mark will then schedule coordination meetings and pre-submittal meetings with individual utilities, Norfolk Southern, and GCRTA. At these meetings, the Walsh DBT and third parties will review plans, resolve issues, confirm requirements and expectations for submittals, and coordinate the sequencing and scheduling of construction activities. Mark will track third party coordination tasks using an enhanced third party coordination matrix. The enhanced matrix will allow tasks to be sorted by owner, buildable unit, schedule, and criticality. Mark will document all third party discussions, design decisions, and construction changes. He and his team will participate in the weekly Utility Coordination, Rail Coordination, Schedule Status, and Task Force meetings to synchronize all tasks.

Coordination with Stakeholders: Stakeholders also need clear, concise, and consistent communication for them to manage their activities during the Project. The Walsh DBT will use interface approaches that proved successful on Innerbelt CCG1 to establish and maintain positive relationships with residents, businesses, institutions, organizations, and others stakeholders.

The Walsh DBT will implement multiple communication strategies to keep stakeholders engaged and informed as the Project progresses. Since different groups of stakeholders may have different needs, the Walsh DBT recognizes the need to present information in different formats or methods to reach the widest possible audience. With the assistance of Public Information Point of Contact David Bennett and DB Diversity/Outreach Lead Manager Halle Jones Capers, Mark will schedule an introductory meeting with stakeholders to discuss the Project and share the schedule and sequencing of the various buildable units and maintenance of traffic provisions. The stakeholders will have an opportunity to ask questions, identify issues, and meet face-to-face with Walsh DBT staff.

Prior to the commencement of construction activities each season, the Walsh DBT will update stakeholders on the schedule and sequence for the upcoming season, including maintenance of traffic. Where construction activities impact specific stakeholders, additional individual coordination meetings will be scheduled and held with those stakeholders.

Walsh DBT Experience with the City of Cleveland, Railroads, and Utilities.

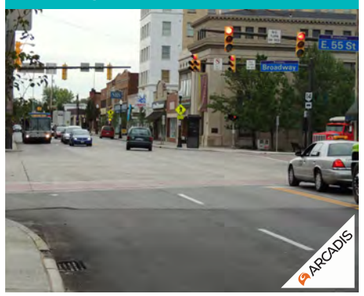
Innerbelt CCG2 Design-Build

Utility/Rail/City Coordination Expertise: On Innerbelt CCG1, Mark Hedrick performed extensive coordination with Norfolk Southern, GCRTA, and local utilities. He also coordinated the demolition of 16 buildings. His recent work with the NEORSD on the Easterly Tunnel Pump Station on Cleveland's east side and the Louis Stokes VA Medical Center gives him additional local coordination expertise.

Torrence Avenue Grade Separation

Rail Relationships: Parsons and Arcadis each have experience providing engineering reviews of developed plans for Norfolk Southern, and Walsh has experience constructing grade separated bridges for Norfolk Southern and other Class I railroads. Through this experience, the Walsh DBT is well-versed in the Norfolk Southern and AREMA standards, and the process of achieving railroad approvals.

Broadway Avenue Rehabilitation



City and Utility Relationships: Arcadis has worked closely with the City of Cleveland through general service contracts with Cleveland Engineering and Construction, Cleveland Water Department, Water Pollution Control, and Cleveland Public Power. This experience gives the Walsh DBT insight into the unique requirements of each department and their applicable standards required for OC3.

Project Management Key Personnel

The Walsh DBT's Project Management Key Personnel includes John Tracy as DB Project Manager and Mark Hedrick as DB Rail/Utilities/City Coordinator. Both are long-time residents of the Cleveland area and both served in similar roles on the successful Innerbelt CCG1. Their resumes are provided in **Part F.2** and are briefly summarized below.

DB Project Manager
John Tracy

John has over 20 years of construction experience and has led multi-disciplinary design-build teams to successfully develop and execute complex bridge and roadway projects. John served in the same role on Innerbelt CCG1, where he led the design-build team to exceed DBE and workforce goals, achieve an INVEST Gold rating, and perform work safely with the highest quality outcome. This experience, along with his history working with several of the same team members and additional large-scale, urban project experience, has prepared him to serve as the DB Project Manager on OC3. Highlights of John's qualifications include:

- **High-profile project experience in Cleveland:** John served as the Project Manager for Innerbelt CCG1 and the Veterans Memorial Bridge project. On each of these successful projects, John worked with ODOT District 12 and many of the same third parties and local stakeholders as OC3.
- **Large project experience:** John has led teams on large-scale projects, including the $287 million Innerbelt CCG1, the $899 million Pennsylvania Rapid Bridge Replacement Program P3, and the $190 million Allegheny River Bridge.
- **Track record of achieving accelerated project schedules:** John led the SR 30/10 and SR 30/11 projects for PennDOT to improve the schedule by more than six months.
- **Experience implementing diversity programs and achieving goals:** On Innerbelt CCG1, John led the team to exceed the 15% DBE goal by over $3 million and exceed the 40 trainee goal with 147 trainees.

John's experience will benefit OC3 as he leads the team and sets the tone and culture for safety, quality, and DIO priorities as the DB Project Manager. He is ultimately responsible for the Walsh DBT's performance. In addition to handling the Project's contractual matters, John will ensure personnel and resources are made readily available for the Project. He will be co-located full-time for the duration of the Project.

DB Rail/Utilities/City Coordinator
Mark Hedrick, P.E.

Mark has over 19 years of relevant experience. He is a local resident and an Ohio professional engineer, and has worked in Northeastern Ohio for most of his career. As a result, he is familiar with the needs and requirements of the City of Cleveland, Norfolk Southern, GCRTA, NEORSD, and the local utilities. He understands the coordination, permitting, utility requirements, and overall effort required of a project the size and complexity of OC3. On Innerbelt CCG1, Mark served in this same role successfully coordinating extensive rail, utilities, and City issues. Highlights of Mark's qualifications for the OC3 DB Utilities/Rail/City Coordinator position include:

- **Past successful performance in the same role:** Mark performed in this same role on Innerbelt CCG1. He coordinated major utility design and relocation, coordinated with the impacted railroads, and coordinated demolition for 16 buildings.
- **Design-build and large project experience:** Mark has strong design-build experience on transportation projects including Innerbelt CCG1 and the $178 million I-70 "Super 70" Design-Build.
- **Existing relationships in Cleveland:** With a resume of project experience in the Cleveland area, Mark has built relationships with many of the entities he will be coordinating with on the Project.

For OC3, Mark will be responsible for the Walsh DBT's coordination with utilities, railroads, City and local representatives, and other third parties. He will have the authority to make commitments on behalf of the Walsh DBT relevant to his role on the Project. Mark will be supported in these efforts by design and construction discipline leads to incorporate schedule, design, and construction requirements.

Management Approach Resulting in a Successful Project

John, Mark, and the entire Project Management staff (**Figure A.9**) will use the Walsh DBT's management approach described throughout this Part A to meet the needs of OC3 and achieve the Project Goals. Their approach to managing the successful execution of the Project Goals includes:

Implementing a robust PMP to deliver OC3 with best value: John will work closely with ODOT and each Walsh DBT lead to develop and implement a PMP that thoroughly addresses our plan to successfully deliver the Project, including processes and communication needed for quality. As part of the PMP, the Walsh DBT will create a Risk Management Plan that provides the framework for our team to identify project risks with input from ODOT, third parties, and stakeholders; take early action to manage and mitigate risks; and allocate risks to an individual manager to ensure the risk is monitored, mitigated, and controlled.

Providing a community-oriented approach to deliver a positive economic impact to the community: John will promote diversity, inclusion, and outreach efforts and require each DBT member firm to participate in DIO efforts. John will ensure that the proper attention and resources are given to these efforts. He will work with Halle and Brenda to exceed the NSLE and OJT goals, as demonstrated on Innerbelt where Walsh mentored and assisted three firms to obtain ODOT prequalification and five to attain DBE status. Walsh exceeded the 40 trainee goal with 147 trainees and exceeded the 15% DBE goal.

Maintaining quality independence from production and implementing a comprehensive QMP to maximize quality: We are committed to implementing lessons learned to ensure "right the first time" construction. This includes maintaining quality independence from production. Design and construction QC managers each report to the Executive Committee. The Executive Committee includes executive-level personnel from each of the member firms. Additionally, production personnel are empowered and expected to uphold the highest standards for quality performance and stop any act or situation that is felt to be unsafe or compromise quality with no fear of reprisal.

Using an integrated design-build schedule to minimize the duration of traffic impacts and open all roadways to traffic early, by October 1, 2021: We have incorporated a buildable unit methodology into our detailed CPM Project Schedule that integrates the design, IQF and owner reviews; agency approvals; utility, Norfolk Southern, and GCRTA coordination; and construction processes. This methodology:

- Supports early initiation of design for critical construction activities and long-lead items
- Allows separate buildable units related to Norfolk Southern and GCRTA railroads, utilities, and right-of-way from other critical-path items so that construction can start
- Facilitates NSLE subcontractor engagement, with work packages prepared based on the capabilities, qualifications, and resources of each subcontractor

We will use this CPM Project Schedule as a tool to ensure the Project is completed on time. Margaret Yanosko, Project Scheduler, worked closely with both John and Mark during Innerbelt CCG1. For OC3, Margaret developed our preliminary CPM Project Schedule with input from design, construction, quality, and DIO teams. After award, Margaret will continue to manage the CPM Project Schedule by closely coordinating with both design and construction. Updates to the CPM Project Schedule will be submitted monthly. Look-ahead schedules will be updated and reviewed each week.

Using FHWA's INVEST tool to identify opportunities to improve the Project's economic, social, and environmental outcomes: The Walsh DBT commits to achieving INVEST Silver on OC3. John will drive this effort through design and construction and work with Sustainability Manager Margaret Hewitt to develop sustainable strategies and practices for each stage of the Project. On Innerbelt CCG1, Walsh helped to develop the "Green 7" and achieved a Gold Level rating in the pilot INVEST program. The project received FHWA's Environmental Excellence Award.

Maintaining safety independence from production and implementing a comprehensive site-specific safety plan to deliver the Project with zero lost-time incidents: Safety matches quality as top priorities. Michael Axton, Safety Manager, will report to the Executive Committee to ensure independence from production. John will work closely with Michael and Scott Febus, DB Construction Project Manager, to emphasize the importance of safety and encourage safety to be designed into the Project and executed in all construction activities. Similar to quality, all personnel on-site are empowered with stop work authority to stop unsafe acts or conditions.

Closely coordinating with the City of Cleveland and utilities to demolish existing residences and commercial structures ASAP: The Walsh DBT will work closely with ODOT, the City, and utilities to enable expedient building demolition. As he did for Innerbelt CCG1, Mark will coordinate building visits with ODOT and the demolition contractor to develop demolition plans and prevent delays. He will coordinate site visits for building inspections, utility disconnects, maintenance of traffic, and road closures, and ensure the site is secure at all times. He will also ensure proper material disposal and documentation.

Figure A.9 Project Management Team.

SAFETY MANAGER
Michael Axton
20 Years' Experience • DB Experience

Michael will oversee workforce and public safety. He led safety efforts on the ORB Downtown Crossing DB, Cannelton Hydroelectric Dam, and the Pennsylvania Rapid Bridge Replacement P3. He has produced multiple innovative safety programs to improve safety performance. He has served as a firefighter in his hometown for the past 22 years.

DB CONSTRUCTION QUALITY CONTROL MANAGER
Luke Wilson
12 Years' Experience • DB Experience

Luke will be responsible for construction QC for the Project, including overseeing inspections and documentation. He has experience performing in a similar role on the ORB East End Crossing P3 and the Milton-Madison Bridge Design-Build, and has experience maintaining project-specific quality management plans.

DB DESIGN QUALITY CONTROL MANAGER
Tariq Masud, P.E., CQE
22 Years' Experience • DB Experience

Tariq brings over 22 years of experience in quality engineering management associated with transportation, fabrication, and construction projects. He brings this experience implementing ISO 9000 and quality award criteria as the DB Design Quality Control Manager, ensuring efficient coordination with the IQF on the Project.

RAILROAD COORDINATOR
Michael York
50 Years' Experience • GCRTA Experience

Michael will coordinate closely with the GCRTA and Norfolk Southern to support Mark Hedrick. Michael brings over 50 years of experience directing transportation planning and development projects for multiple transit agencies. He worked for the GCRTA for 27 years, first as Director of Operations Planning, and later as Deputy General Manager - Operations.

DB COORDINATOR
Matt Filipowski
14 Years' Experience • DB Experience

The DB Coordinator position is critical to ensuring constructible design. Matt brings 14 years of industry experience, which has included coordinating design on large transportation projects, including the Pennsylvania Rapid Bridge Replacement P3. In addition to serving as a DB Coordinator, Matt has experience with major ODOT project through his work on Innerbelt CCG1.

PROJECT SCHEDULER
Margaret Yanosko
6 Years' Experience • ODOT DB Experience

Margaret is a graduate of Case Western Reserve University and brings six years of design-build scheduling on two high-profile, high-value projects, including the $287M Innerbelt CCG1 and the $763M Ohio River Bridges East End Crossing P3). On Innerbelt CCG1, she worked closely with John Tracy and Mark Hedrick on the schedule as well as third party coordination.

PI POINT OF CONTACT
David Bennett
25 Years' Experience • ODOT DB Experience

David will work with ODOT's staff to continue effective public involvement. He is a resident of Northeast Ohio and has provided over 25 years of communications expertise on large ODOT projects. David will work with both the DIO team in community outreach activities, and with the Project Management team in overall PI efforts.

SUSTAINABILITY MANAGER
Margaret Hewitt, LEED AP, ENV SP
ODOT DB Experience

Margaret assists businesses with sustainable building projects and the green rating systems. Her goal is to make a positive impact in the environments in which people live, work and play. Her career also includes leading the team that achieved INVEST Platinum level certification for the George V. Voinovich Bridge in Cleveland, Ohio.

Effective Project Schedule

The Walsh DBT commits to achieving Substantial Completion **31 days early, by October 1, 2021**. We have shown how we will accomplish this in our CPM Project Schedule and schedule narrative provided in **Part F.6**.

B. DESIGN AND IQF

The Walsh Design-Build Team
Walsh | Parsons | American Structurepoint | G. Stephens

Part B. Design and IQF

The Walsh DBT design team that has been dedicated to the development and delivery of this Technical Proposal will continue in their roles after award to finalize a design that is constructible, achieves best value, and serves the needs of the neighborhoods located within Cleveland Wards 4, 5, and 6. Our team thoroughly understands all aspects of the Project and developed design optimizations that provide benefits to the schedule, maintainability, durability, and sustainability.

Design Organization and Key Personnel

OC3 demands a design team that is highly attuned and equipped to address the challenges of designing and constructing a quality project within OC3's urban neighborhood environment. Our design team is led by Tom Gandolfi, DB Design Project Manager, who has exceptional experience in this role on high-profile design-build projects during his 35-year career. Complementing Tom's national experience is Craig Hebebrand, Deputy Design Manager. Craig brings 34 years of experience with ODOT District 12 and design-build projects, and a thorough understanding of the Opportunity Corridor. He also has established relationships with the various third parties and stakeholders.

Tom and Craig lead a team of Discipline Lead Engineers and engineering professionals with ODOT experience. This team includes Key Personnel DB Lead Structural Engineer Robert Ballard and DB Lead Roadway Engineer Ken Wells. Resumes for each of the following Key Personnel are provided in **Part F.3**.

NSLE Commitment. The design team, including Tom Gandolfi (pictured below right), was active during the pursuit with community and NSLE outreach.

DB Design Project Manager Tom Gandolfi, P.E.

Tom is an accomplished senior design manager with more than 35 years of diverse experience managing, supervising, and coordinating the design and construction of roadways, highways, bridges, and airports. His success managing multi-firm design teams, developing innovative solutions to maximize best value, and collaborating and partnering with project owners makes him ideally suited for the role of DB Design Project Manager for OC3. Tom has worked on both sides of the project team—as a design manager for the design-build team and as an owner's representative—and is able to quickly identify and resolve critical project delivery issues as a result. Additional highlights of Tom's qualifications for OC3 include:

- **Extensive design experience:** Tom has over 35 years of experience in the design and construction of over $2.5 billion worth of transportation projects.
- **Strong leadership of similarly structured teams:** Tom has experience from 11 alternative delivery projects and has led multi-discipline, multiple-firm teams including small and disadvantaged firms.
- **Successful history working with Walsh:** Tom performed as design manager on several design-build projects with Walsh, including the $1 billion IH-35E Managed Lanes and the $598 million Northwest Corridor Express Lanes.
- **Delivering best value:** On Northwest Corridor Express Lanes, Tom led the development of design innovations that saved $65 million and improved the schedule by seven months.

Tom is responsible for and will actively manage the overall design of the Project. He will be co-located full-time throughout design.

DB Lead Structural Engineer Robert Ballard, P.E.

Robert has complex structure design expertise and has led teams to design many types of structures and a variety of bridge substructures, foundations, and retaining walls. This broad experience enables him to provide unique design solutions for OC3's structures and walls. Highlights of Robert's qualifications include:

- **Experience with similar projects:** Robert has 36 years of experience including complex urban bridge, highway, and interchange projects. He has designed structures similar to those for OC3, including pre-stressed concrete girders and box beams, steel plate girders, curved girders, and post-tensioned concrete pier caps.
- **ODOT project experience:** Robert understands ODOT requirements and standards from his work leading the bridge design on numerous ODOT projects including the FRA-270/315/23 North Side Mega Fix project, CDMS Project 10, FRA-161-25.90, and CDMS Project 3, FRA-270-31.34.
- **Fast-track design-build experience:** Robert has been the lead bridge designer on fast-track design-build projects such as the Indiana Toll Road 80/90 PUSH Design-Build.

Robert will be responsible for ensuring that all structural design requirements are met. He will be co-located during design.

DB Lead Roadway Engineer Ken Wells, P.E.

Ken has over 27 years of experience designing and planning highways and managing large, complex transportation projects including design-build projects. He consistently delivers high quality projects on time and within budget. Ken's qualifications for the DB Lead Roadway Engineer position for OC3 include:

- **Similar project experience:** Ken led multi-discipline teams on design-build and complex bridge, highway, and interchange projects. He worked with the Walsh team as the pursuit Design Manager on the Portsmouth Bypass project.
- **Major boulevard project experience:** Ken understands the unique aspects of complex urban boulevard infrastructure through experience on Squirrel Road in Auburn Hills, Michigan, and US 24 and Orchard Lake Road, both in Pontiac, Michigan.
- **Utility and rail requirements understanding:** For 10 years, Ken served as the city engineer for two municipalities, which gives him a strong understanding of municipal and private utility requirements. Ken also understands the complex railroad coordination and approval process through involvement with railroad design and coordination.

Ken will be responsible for ensuring that all roadway and drainage design requirements are met. He will be co-located during design.

Deputy Design Manager, Craig Hebebrand, P.E.

34 Years' Experience • ODOT DB Experience • Co-located throughout design

Craig Hebebrand provides the team familiarity with the nuances of working in Cleveland. As a senior project manager with 34 years of experience successfully implementing major transportation infrastructure projects, Craig will work with Tom to manage the overall design and assist in the coordination of third parties and stakeholders. Craig brings value to the OC3 Project:

- **Extensive knowledge of the Opportunity Corridor:** Craig served as Project Manager during the planning and preliminary engineering phases of the Opportunity Corridor program.
- **ODOT design-build experience:** Craig served as ODOT's Project Manager on the Department's first design-build project (LAK-2) and largest design-build project (Innerbelt CCG1).
- **Successful history of local third party and stakeholder coordination:** Craig has coordinated with third parties and stakeholders to implement Cleveland's major transportation infrastructure projects.
- **Multiple perspectives:** As a former ODOT project manager now with Arcadis, Craig brings a unique understanding to design-build from owner and DBT perspectives.

CRAIG ATTENDED BOTH WALSH DBT OUTREACH EVENTS AND MET WITH NSLE BUSINESS OWNERS TO DISCUSS OPPORTUNITIES ON OC3.

Design Management Approach Resulting in a Successful Project

The Walsh DBT will measure success on OC3 by our ability to achieve ODOT's Project Goals. Our design management team will use our "no surprises" approach to meet the needs of OC3 and deliver a successful design. This management approach includes:

Assigning experienced personnel to lead all tasks and develop innovations to provide best value. In addition to the design Key Personnel, our design team includes experts across all engineering disciplines needed to successfully execute Project design (**Figure B.1**). Each Discipline Lead Engineer coordinates the design effort for the discipline and co-leads Task Forces to align efforts with construction, DIO, quality, third parties, and ODOT. In weekly Task Force meetings, we will discuss the schedule, early construction needs, packaging, constructibility, sequencing, and staging. Task Forces provide a forum to develop innovations and deliver best value. Through the pre-bid Task Force meetings for OC3, we developed design optimizations and several alternative technical concepts (shown in **Figure B.2 on page B-3**).

Using ISO 9001:2008 processes to maximize design quality. Parsons' ISO 9001:2008-certified quality policies and procedures will form the basis of our Design Quality Management Plan (DQMP) tailored to meet ODOT's requirements. Tariq Masud, DB Design QC Manager, will follow this process to perform internal QA audits on every formal design submittal. This added value will ensure efficient formal QA reviews by the IQF. Additionally, during the pursuit, we developed 3D models of structures, roadway, and utilities to identify and design around conflicts, which will improve quality during construction. Tom Gandolfi and Craig Hebebrand will be co-located during design to efficiently coordinate design and reviews with Discipline Lead Engineers and the IQF.

Sustainable Success. Parsons led sustainability evaluations on Walsh's Ohio River Bridge East End Crossing Project, which received the Envision Platinum Award from the Institute for Sustainable Infrastructure.

Using an integrated design-build schedule and coordinated approach to minimize traffic impacts and open all roadways to traffic early, by October 1, 2021. Our integrated CPM Project Schedule incorporates both design and construction activities. We have aligned design packages to meet submittal guidelines and deadlines for critical buildable units, perform early design to meet fabrication schedule, and account for review processes. The schedule will include input from ODOT, third parties, and key stakeholders. We commit to addressing concerns and honoring the commitments reflected in the contract documents. To facilitate coordination of design solutions and construction approach with third parties, we will foster a partnering atmosphere among Project participants.

Incorporating NSLE subconsultants to deliver a positive economic impact to the community and maximize team diversity. The Walsh DBT design team includes six NSLE firms. Parsons has committed to mentoring both Eggeman and Cad Concepts and will hire professional services trainees from Wards 4, 5, and 6. Tom and Craig have been working with Halle Jones Capers during outreach events and Task Force meetings to identify potential candidates and create appropriately sized scope packages for NSLE firms.

Integrating aesthetic and sustainability guidelines into the design. The Walsh DBT commits to achieving INVEST Silver and incorporating aesthetic design consistent with the other Opportunity Corridor projects. Leading this effort from the design side is Lead Aesthetics Manager Craig Richardson, Sustainability Manager Margaret Hewitt, and design sustainability advisor Catherine Sheane. Catherine led sustainability evaluations for the ORB East End project that Walsh constructed. The project was the first bridge to receive the Envision Platinum Sustainability Award from the Institute for Sustainable Infrastructure.

Figure B.1 Discipline Lead Engineers. The Walsh DBT has committed qualified experienced Discipline Lead Engineers to the Project. These engineers have been working on the design during the pursuit and will continue after award.

LEAD GEOTECHNICAL ENGINEER
David Bird, P.E.
42 Years' Experience • DB and Ohio Experience

David will perform the geotechnical engineering efforts for the Project. He will provide efficient and cost effective solutions for bridge and wall foundations design using experience from similar roles on projects nationwide including the MA-126 CSX Railroad Bridge in ODOT District 8 and the I-65/I-465 Interchange in Indiana.

LEAD AESTHETICS MANAGER
Craig Richardson, RLA
22 Years' Experience • DB Experience

Craig will work with the design team to ensure all aesthetic and enhancement elements follow the Project requirements for bridge, wall, landscape, and streetscape elements and consider future public plaza contracts. He has significant experience in this role, including the Anacosta River Tunnel Design in Washington D.C. and Northwest Corridor Design-Build in Atlanta.

LEAD MAINTENANCE OF TRAFFIC ENGINEER
Patrick Gibbons, P.E.
29 Years' Experience • DB Experience

Patrick will lead roadway geometric and MOT design. He has served in this role on many major urban projects including I-465 West Leg Reconstruction in Indianapolis, IN, and SH183 Managed Lanes Design-Build in Dallas, TX. He has prepared transportation management plans, determined incident management strategies, and participated in work zone review workshops.

LEAD RAILROAD BRIDGE ENGINEER
Joseph Abruzzo, P.E.
25 Years' Experience • DB and ODOT Experience

Joe will use his 25 years of experience in structural design to focus on the Project's railroad bridge design. He has been engaged solely in the design of Class I railroad bridges, retaining walls, and other structures, including Norfolk Southern. Joe's experience includes the NS Railway Rehabilitation of Bridge RD-119.05 over East 91st Street and Quincy Avenue in Cleveland.

LEAD RAILROAD ENGINEER
Patrick Porzillo, P.E.
30 Years' Experience • DB and ODOT Experience

Patrick will ensure the design meets the required track geometric criteria and will coordinate with the Lead Railroad Bridge Engineer to ensure railroad infrastructure is designed in accordance with all governing regulations and specifications. His experience from working on four contracts with CSX demonstrates his track design expertise.

LEAD SURVEYOR
Robert Brazier, P.S.
28 Years' Experience • DB and ODOT Experience

Robert, a Registered Surveyor in Ohio, will use over 30 years of experience to provide survey and maintain documentation for buildings, structures, utilities, and critical locations in compliance with ODOT's Survey Manual. He has performed in this role on several Ohio projects including the ODOT WOO-75 Mainline Widening Project.

LEAD DRAINAGE ENGINEER
Phil Berdis, P.E., CPESC, CPSWQ
23 Years' Experience • ODOT Experience

Phil will use his 23 years of experience in roadway and hydraulic design (including storm sewer analysis and design) to guide drainage design that complies with urban drainage design specifications and Project requirements. He has experience using a variety of hydraulic analysis engineering software on projects for ODOT and the City of Cleveland.

LEAD TRAFFIC CONTROL ENGINEER
Dan Jozity, P.E., PTOE
17 Years' Experience • ODOT Experience

Dan will lead design of pedestrian and traffic signals, signing, pavement markings, lighting, and other traffic control. His diverse background in transportation planning and design is demonstrated through his experience in similar roles including ODOT districts, City of Cleveland, Clark Avenue Rehabilitation, and General Engineering Service for ODOT District 11.

LEAD LIGHTING ENGINEER
Mark Hunter, P.E.
28 Years' Experience • DB and ODOT Experience

Mark will use over 28 years of lighting system design and layout experience for freeways, arterials, and collector systems to ensure all lighting elements are in compliance with the Project lighting design criteria. He served in a similar role on Innerbelt CCG1 and I-71/I-670 where he provided specialty lighting design including decorative streetscape lighting.

ENVIRONMENTAL PERMITTING SPECIALIST
Cory Grayburn
30 Years' Experience • DB and ODOT Experience

Cory will obtain environmental permits to achieve an environmentally compliant design. He served in this role on Cleveland Innerbelt Plan EIS for I-71, I-77, and I-90 and Akron Central Interchange Project on I-76/I-77, where he managed Phase I and II ESAs, noise analysis, Section 106 process, Phase I and II history/architectural surveys and Section 4(f) analysis.

LEAD UTILITIES ENGINEER
Ed Adamczyk, P.E.
35 Years' Experience • DB and ODOT Experience

Ed will manage utility design and understands that utilities are on the critical path. He will ensure utility design, relocation, and modification complies with applicable standards. Ed has served as design project manager on major urban transportation projects for ODOT, City of Cleveland, and GCRTA. These projects included extensive utility design and coordination.

LEAD SUBSURFACE UTILITY ENGINEER
Mark Ward, P.E.
31 Years' Experience • DB and ODOT Experience

Mark will use experience in underground utility location using remote sensing equipment to manage the SUE efforts including providing any necessary SUE information to utility providers. He will implement the four quality levels of SUE (records research, visible above-ground survey, designating, and locating in accordance with CI/ASCE 38-02 standards).

IQF Role and Responsibility and PMP Design Quality

The IQF will verify that all aspects of design meet the requirements of the contract documents, are technically sound, and are designed to meet or exceed the quality requirements for the Project. The IQF's focus includes strictly adhering to the PMP during design, reviewing contract documents, and tracking all comments and resolutions to ODOT's satisfaction. As the independent and autonomous voice for the team, the IQF will identify and resolve quality issues using our documented quality process to ultimately produce a high quality design for each project phase.

Design IQF Project Manager David Johansen, P.E.

David has 33 years of experience working for ODOT in both construction and design roles involving QA/QC processes. His experience managing, supervising and coordinating all types of roadway, highway, and bridge design projects make him a unique asset to the Walsh DBT. As the Design IQF Project Manager (DIQFPM), David will use this experience and specific knowledge of design-build processes to lead the IQF team and actively manage design QA. David's resume is provided in **Part F.3**. Highlights of David's experience include:

- **ODOT Design Quality Experience:** In the role of production administrator, David implemented design quality processes that used post-construction and change order tracking to improve future plan quality, making the design process dynamic and able to quickly change with trends.
- **ODOT Design-Build Project Experience:** David has design-build experience with ODOT spanning 20 years from the beginning of ODOT's design-build program on Medina 271, where he served on the design and construction QA/QC teams. He was also on the design and construction QA/QC review teams for the $150 million Morrow County design-build projects.

David will be co-located throughout design and will remain independent from design production by reporting directly to John Tracy, DB Project Manager.

David is supported by committed and co-located IQF staff for roadways and structures:

Design IQF Roadway Lead, Bruin Ramsdell, P.E.: As the IQF Roadway Lead, Bruin will report to David and use his knowledge of ODOT's design standards and policies to review and verify all non-structural design work. Bruin has 16 years of roadway design experience that includes numerous design-build projects. For instance, he served as roadway design QA/QC manager on the Gemini Parkway Extension Project in ODOT District 6, a new roadway that was similar to OC3 with multiple signalized intersections, utility work, drainage improvements, and multiple agency coordination. Bruin also served as the roadway design manager on the MRW-71-12.19 Design-Build Project in ODOT District 6.

Design IQF Structures Lead, Chris Bettinger, P.E.: As the IQF Structures Lead, Chris will report to David and use his experience to review and verify the quality of all structural design work. Chris has 16 years of ODOT experience, including bridge, culvert, and retaining wall design, analysis, and inspection; structure plan preparation; and hydraulic analysis and design. He is an ODOT-certified Level 2 Bridge Designer and Minor Bridge Inspector. Chris has provided structural design services for more than 50 ODOT bridges in his career and has been responsible for nearly all of American Structurepoint's structural tasks in Ohio since 2005. His design-build experience includes MRW-71-12.19, ORB East End Crossing, MED-7124.02, and Gemini Parkway.

Design Quality Management Components of the Project Management Plan

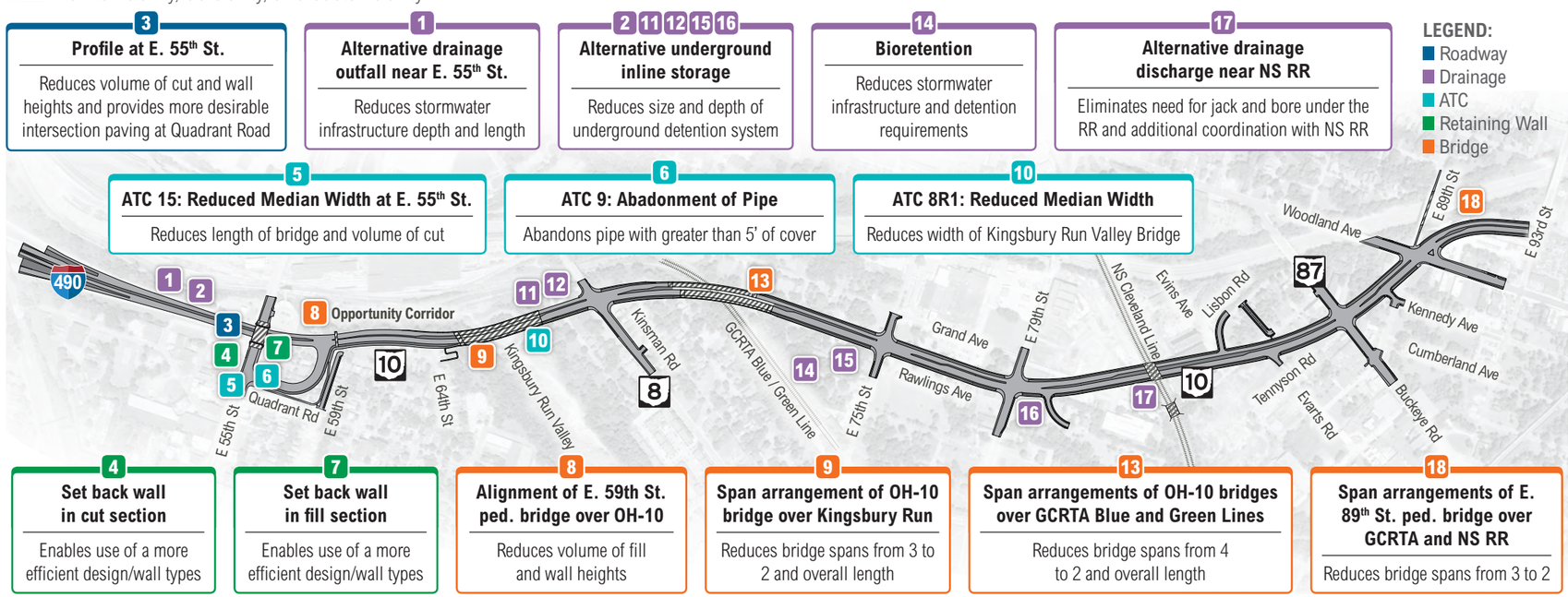
The Walsh DBT will maximize quality by implementing a PMP that defines quality roles and responsibilities; outlines training procedures for design and construction staff, including subcontractors; and details lines of communication between each level of quality management. The Walsh DBT empowers all employees with stop work authority if quality issues are identified. The draft components of the Walsh DBT's PMP related to design quality are provided in **Part F.12**.

Conceptual Design

Opportunity Corridor Boulevard (OH-10) will be a vital link for motorists traveling from I-77/I-490 to the University Circle area. It will also connect the adjacent neighborhoods to transit, pedestrian, and bicycle infrastructure. The Walsh DBT's conceptual design provides for the full scope of the Project as determined by a thorough review of the contract documents, involvement with the community, and familiarization with the proposed Project site. Our design is compatible with the adjacent OC2 project, environmental documents, and basic configuration. We developed the design using all governing regulations and our best practices, optimized with innovative concepts.

Figure B.2 shows 14 innovative concepts the Walsh DBT has incorporated in the proposed design. These design concepts include Alternative Technical Concepts 8R1, 9, and 15 conditionally approved by ODOT, as well as 11 other design optimizations and refinements.

Figure B.2 Design Optimizations and Innovations. The Walsh DBT offers 14 innovative ideas that meet the Project Goals and provide benefits to the schedule, constructibility, maintainability, durability, and sustainability.



Surface Water Collection System

Lead Drainage Engineer Phil Berdis and his team have extensive experience designing drainage systems for the City of Cleveland and other large urban areas in Northeast Ohio. They have used this experience to design an efficient surface water collection system for OC3 that effectively services the entire corridor, while minimizing future maintenance. **Figure B.3** identifies the locations of major drainage trunk lines and outfall locations.

To provide significant value, the Walsh DBT design offers several innovative drainage features:

- Eliminated all blind ties to the combined sewer (CS) system by adjusting the side road profiles to shift low points to locations within reach of existing manholes.
- Provided an overall drainage system with greater redundancy, smaller trunk sewer lines, and fewer utility impacts by using additional outfall locations.
- Improved constructibility and minimized the overall footprint by replacing the large 11-foot underground in-line pipe detention system with multiple, shallower, 5-foot HDPE pipes.

The Walsh DBT has designed OC3's surface water collection and drainage system to address the challenges of the Project's urban environment, large combined sewer system service area limit, and overlapping regulations of the City, NEORSD, and ODOT. This design is compliant with the RFP; City, ODOT, and NEORSD regulations; and the ODOT Location and Design Manual, Volume 2.

Our team proposes to use a combination of "gray" and "green" infrastructure to meet the Project requirements. While the surface water collection system consists predominantly of storm sewers and underground detention, the Walsh DBT has incorporated aspects of green infrastructure where practical, such as vegetated filter strips. The design also complements the adjacent multi-use path and pedestrian crossings with bicycle-safe grates and additional catch basins.

In our design, outfall locations govern the size of piping. For roadway drainage, including inlet spacing, roadway channel design, storm sewer sizing, and post-construction stormwater best management practices (BMPs), piping is sized and designed per ODOT Location and Design Manual, Volume 2. Storm sewers are sized to accommodate future development as directed by the RFP. The mitigation BMPs, including the on-site detention basins for the attenuated peak outlet flow and volume design, have been completed per the NEORSD regulations.

The Walsh DBT has coordinated our design with NEORSD. We used Bentley CivilStorm software and NEORSD's InfoWorks ICM sewer model to optimize outfall locations, determine the Project's effect on downstream sewers, and verify that no additional combined sewer overflow events are activated by the proposed improvements. We identified viable storm water outfalls with the least overall impact on the existing City and NEORSD combined sewer systems. With input from the NEORSD, the Walsh DBT determined that discharging to as many viable locations as possible optimizes the performance of the existing sewers and the overall drainage system.

Almost all outfall locations that require water quantity mitigation per the NEORSD regulations have been designed using underground detention. The only location that requires a major above-ground detention basin to satisfy NEORSD's design criteria is Outfall #4, just east of the GCRTA Blue/Green Line overpass, within a drainage easement to be maintained by the City of Cleveland. The Walsh DBT designed the detention basin as both a water quality and quantity feature that treats "first flush" storms. It is sized to attenuate the base 6-month, 24-hour peak flow through 25-year, 24-hour events. The post-development peak flow and volume reduction for all design year storms are well below the existing pre-development conditions as shown in **Figure B.4**.

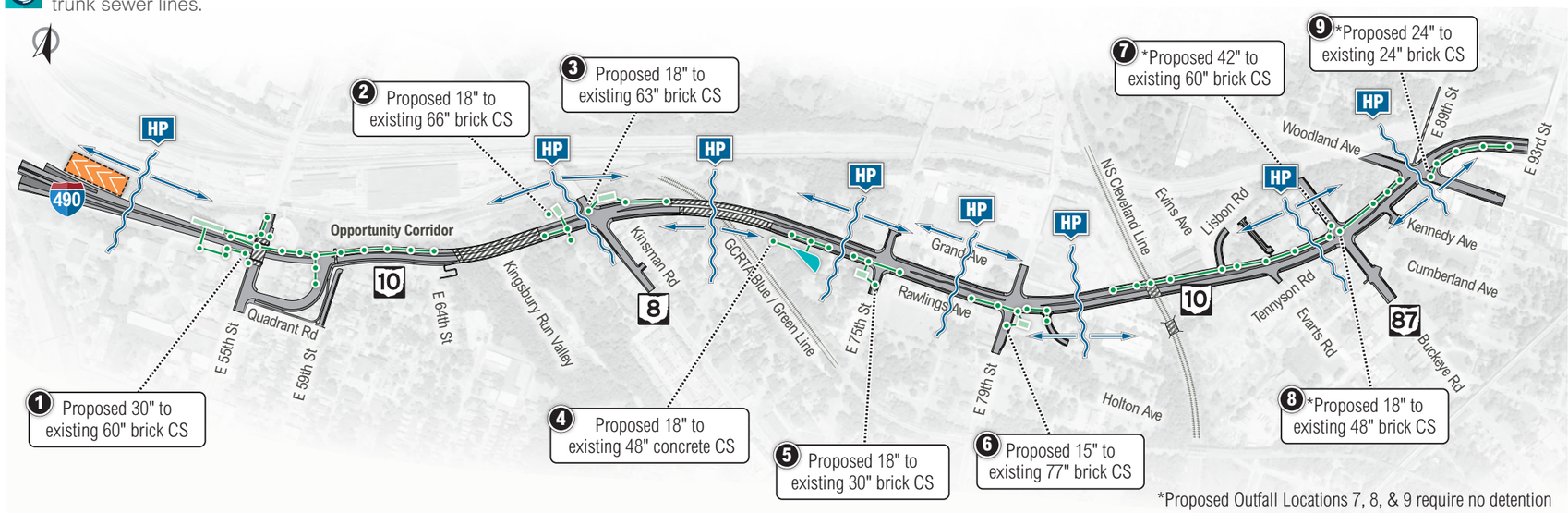
Figure B.4 Outfall #4 Flow Rates and Volumes. The Walsh DBT's design for Outfall #4 results in post-development peak flow and volume reduction for all design year storms that are well below pre-development conditions.

DESIGN YEAR STORM	PRE-DEVELOPMENT		POST-DEVELOPMENT		DETAINED VOLUME
	Flow Rate (CFS)	Volume (CF)	Flow Rate (CFS)	Volume (CF)	
6-Month	1.18	708	2.85	2,397	**1,689**
1-Year	2.03	1,216	4.79	4,023	**2,807**
2-Year	2.71	1,629	6.37	5,349	**3,705**
5-Year	3.25	1,949	7.70	6,470	**4,738**
10-Year	3.64	2,187	8.70	7,308	**5,583**
25-Year	4.15	2,491	9.97	8,371	**6,694**

The water quality outfall structure consists of a 2.5-inch orifice, while the primary device is an ODOT CB No. 2-2B catch basin with a grate to pass the less frequent storms. A secondary emergency spillway is located on the south side of the detention basin and outlets to the existing vegetated channels along the GCRTA Blue and Green Lines, which ultimately empty into an existing 48-inch concrete combined sewer.

The Walsh DBT has designed the Project to minimize the need for post-construction stormwater quality BMPs to meet the NPDES Phase II requirements. All major outfalls now outlet to the combined sewer system. However, the west portion of the Project (Sta. 9+00 to Sta. 18+25 high point) that drains into the existing I-490 drainage system will still exceed one acre, and we expect that a Notice of Intent will be required. With the wide I-490 right-of-way, the Walsh DBT will use vegetated filter strips within the slope areas to treat the flow.

Figure B.3 Surface Water Collection System. The Walsh DBT's optimized drainage design reduces utility and stormwater impacts by using additional outfall locations and smaller trunk sewer lines.



Subsurface Utilities

Walsh DBT member firms have an extensive history coordinating with utility companies within the Project area, having worked on general service contracts or design projects with Cleveland Water, Cleveland Water Pollution Control, NEORSD, Cleveland Public Power, Norfolk Southern, and Dominion East Ohio Gas. Early identification and verification of subsurface utilities that may impact or be impacted by the work provides opportunities to mitigate such impacts by either working with the utility owner to relocate the utility or modifying the design to avoid a conflict.

To **identify** the presence and locations of subsurface utilities (**Figure B.5**), the Walsh DBT thoroughly reviewed the RFP, the proposed design and existing plans, test hole data, utility record information, and details of previous utility work. We have also teamed with Resource International to perform subsurface utility engineering. After award, they will perform test holes to locate and determine exact depths and clearances of potential impacts in highly congested areas such as the East 55th Street intersection. We will use methods such as potholing, vacuum excavation, and hand excavation to uncover and identify subsurface utilities.

The Walsh DBT visited the site to **verify** location, type, and conflict for all of the utilities shown on the Utility Matrix. As an added layer of verification, we modeled both the existing and proposed utilities in 3D to identify additional conflicts. The new information presented in this model has allowed us to optimize the design and minimize or eliminate utility conflicts. **Figure B.6** shows a few examples of verified utilities:

- **East 55th Street:** Verified no conflict
- **East 79th Street:** Verified conflict and modified the design to eliminate the conflict
- **East 89th Street:** Verified conflict and modified the design to eliminate the conflict

This 3D modeling benefits the Project by confirming viability of private utility relocation plans, verifying that proposed work will not create additional utility impacts, and identifying locations of additional subsurface utility engineering. The Walsh DBT will use this tool for future coordination and share the model with ODOT and other interested utilities, third parties, and stakeholders. We will update this 3D model with new information as it becomes available.

We **documented** this information in an expanded Utility Matrix that separates the existing and proposed utilities into categories based on the nature of the utility impact and relocation needs. These categories include spot conflict (such as a pole), long line conflict (such as a sewer or water line), private utility conflict, or no conflict. We will continue to use this expanded Utility Matrix to determine buildable units to work around any problem areas. We will also document existing utilities exposed during the subsurface utility identification process with a GPS receiver and electronic data collection survey technology.

As part of our coordination efforts, the Walsh DBT will assist private utilities to identify, verify, and document utility conflicts. If needed, we can assist in scheduling relocations and determining appropriate locations to move facilities. To meet schedule requirements, we will use approved contractors to complete relocation work for the public utilities.

Figure B.5 Key Public Subsurface Utilities. The Walsh DBT has identified key subsurface utilities and effective means of mitigating conflicts through the identification, verification, and documentation process.

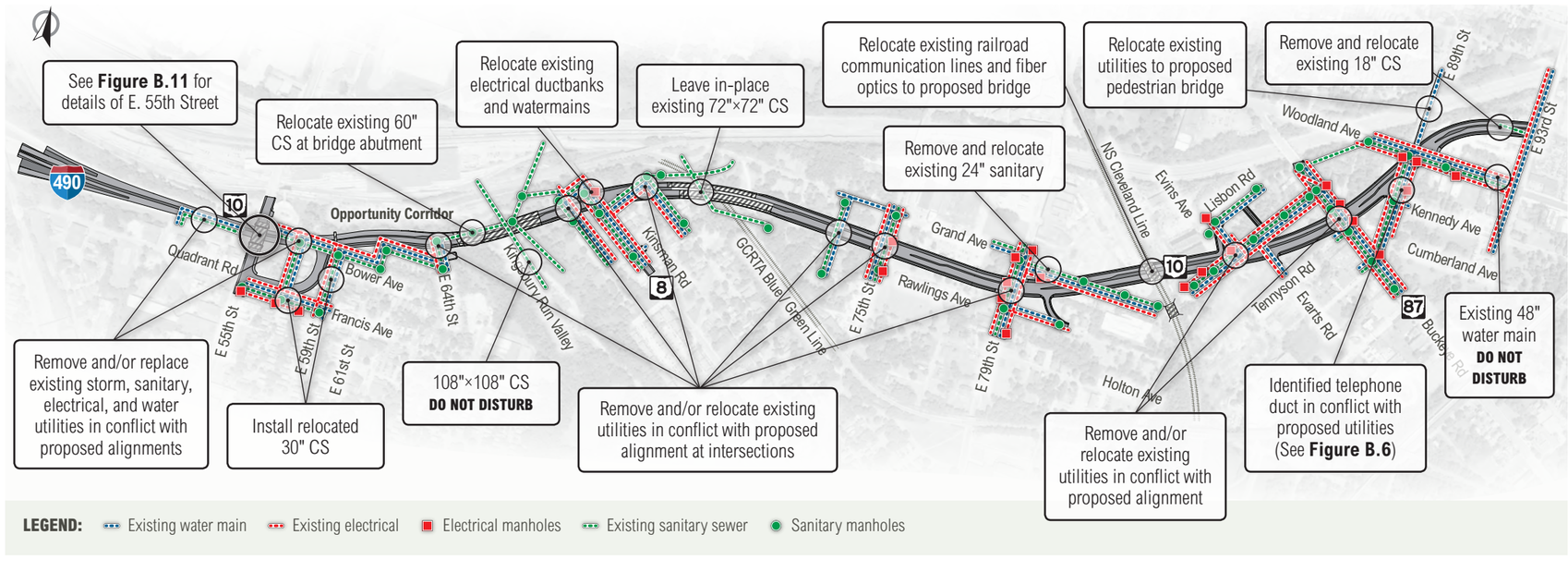
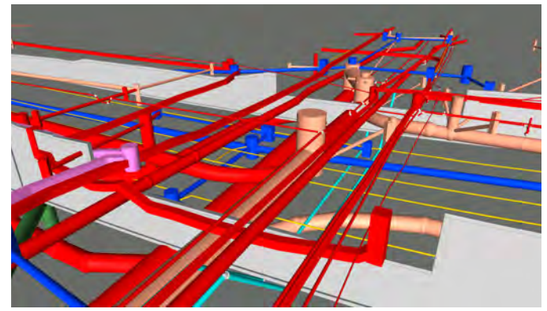
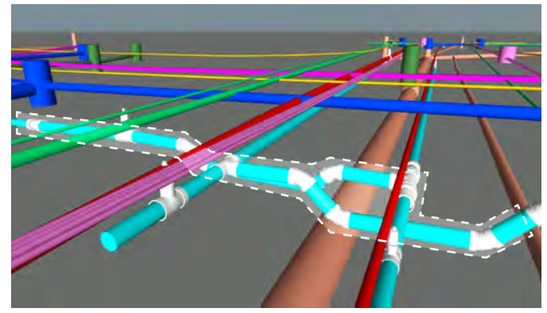


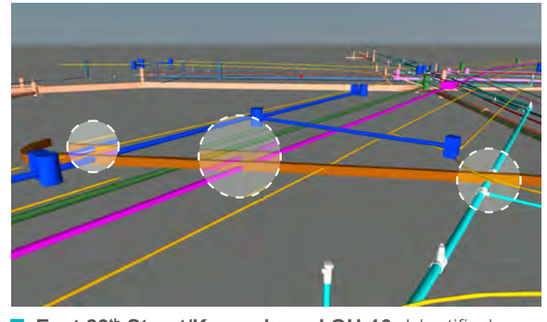
Figure B.6 3D Modeling of Existing vs. Proposed Utilities and Infrastructure. The Walsh DBT created a 3D model that compares existing and proposed utilities and infrastructure. This initiative provides a virtual simulation of subsurface utilities that allowed us to quickly identify conflicts and problem areas during design instead of in the field during construction.



East 55th Street Area: Confirmed that proposed work will not be in conflict with proposed walls or impact other utilities.



East 79th Street: Modified proposed water main to eliminate conflict with other utilities.



East 89th Street/Kennedy and OH-10: Identified additional conflicts with telephone duct with proposed storm sewer and underdrains.

Norfolk Southern Mainline Grade Separation

The route for OH-10 will be depressed below the Norfolk Southern Mainline at a grade-separated crossing. A new Norfolk Southern bridge will carry a four-track alignment over five lanes of OH-10, a landscaped median, a sidewalk, and a multi-use path run. The Walsh DBT's design includes the following innovations:

- Uses tangent pile abutments with "top down" construction to allow the substructures to be built with partial-depth excavation of the roadway below, which reduces the amount of temporary shoring required to support the railroad tracks and the risk involved with supporting the railroad.
- Widening the Phase 1 portion of the structure eliminates a temporary ballast retainer and the need to dowel into a new structure, providing a more durable result.

Robert Ballard will lead the design for the Norfolk Southern structure and retaining walls. Robert will be supported by Lead Railroad Bridge Engineer Joseph Abruzzo, who has 25 years of experience in Class 1 railroad structure design, and Lead Railroad Engineer Patrick Porzillo, who has 30 years of experience in railroad infrastructure. Through this experience working for Class I railroads, the Walsh DBT understands the importance of keeping trains moving with minimal interference from construction operations. This understanding will benefit our ability to obtain railroad sign-off on the bridge design and construction schemes.

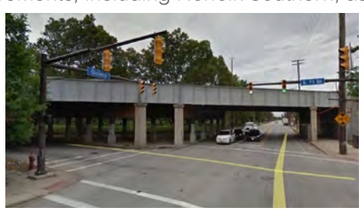
Track Relocation, Phasing, and Tie-ins

The Walsh DBT proposes to use the staging scheme depicted in the RFP documents (shown schematically in **Figure B.7**) to permit both mainline tracks to remain in operation throughout bridge construction. The proposed design and phasing plan for the track relocation provides for concurrent work on the new structure to be built over the proposed OH-10, removal of the existing structure over Grand Avenue, and embankment construction for new track alignment.

The concurrent approach of new bridge construction, old bridge removal, and embankment construction for the new track alignment will minimize rail disruption. The only disruption to rail service will occur between construction phases when the tracks are shifted to the new alignments. These track cut-and-throws will take only a few hours and can be scheduled to suit Norfolk Southern, thus reducing impacts to their operations. The Norfolk Southern Mainline crosses existing bridges east and west of the proposed bridge over OH-10. During each phase, the track alignment will meet the existing alignment prior to reaching those structures. The staging scheme for track shifts provides adequate clearance for the existing high-voltage power line towers that run parallel to the Norfolk Southern Mainline.

Highlights of the Walsh DBT's Class 1 Railroad Bridge Design Experience. Joseph Abruzzo and Patrick Porzillo understand AREMA and Class 1 railroad requirements, including Norfolk Southern, as shown in these examples.

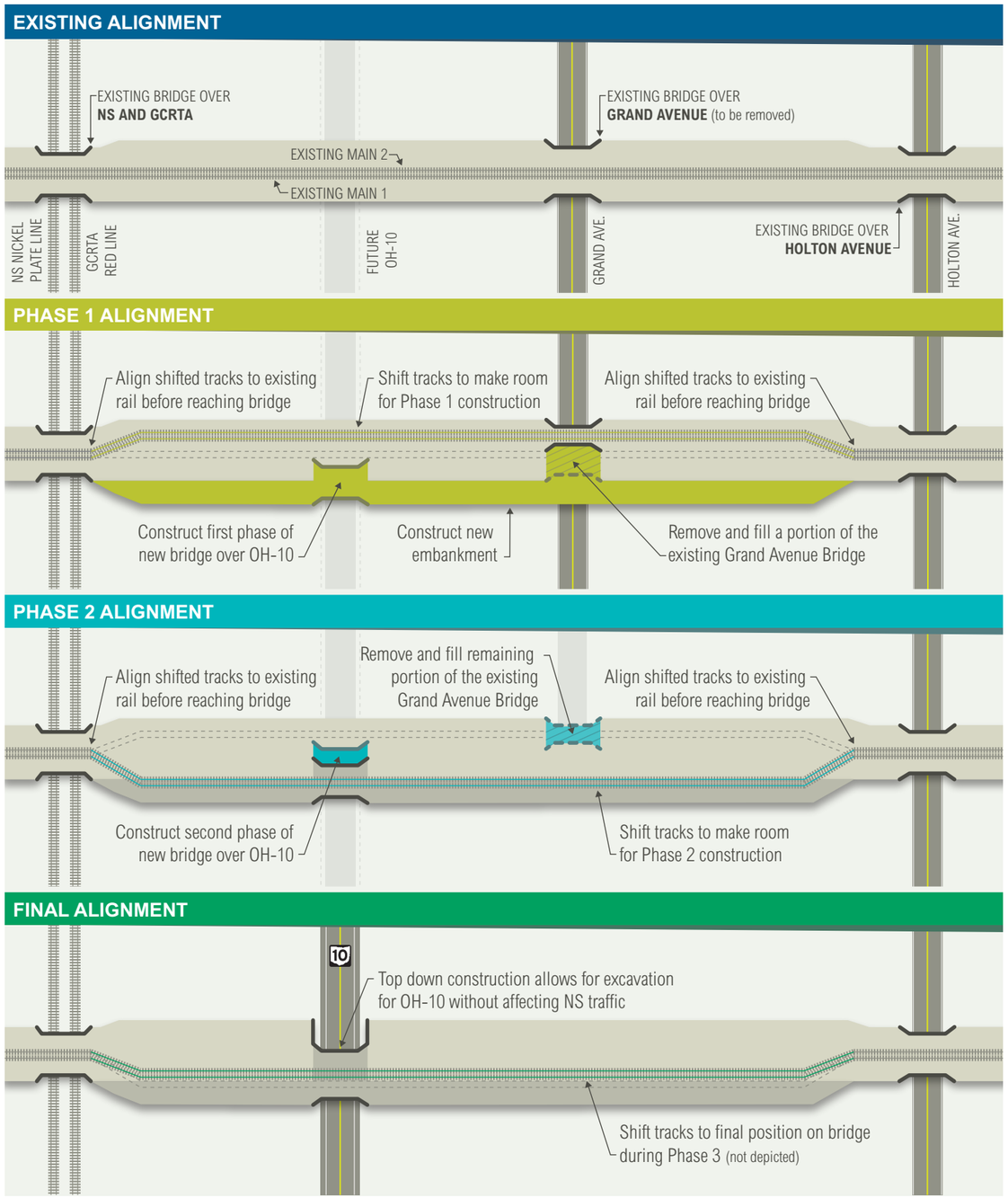
CREATE P1, Chicago, Illinois: Responsible for three of the six bridges on the CREATE P1 project. Developed a design that allowed the active adjacent commuter line to operate unimpeded while the new bridges were constructed.



Norfolk Southern Bridge over East 71st Street and Quincy Avenue Rehabilitation, Cleveland, Ohio: Developed a multi-staged repair scheme that allowed both Norfolk Southern tracks to remain in operation throughout the entire rehabilitation project.

Repairs to the Norfolk Southern Bridge over the Maumee River, Toledo, Ohio: Developed the design to repair the swing mechanism for Norfolk Southern's busy New York-to-Chicago main line that crosses the Maumee River on a swing span in Toledo, Ohio.

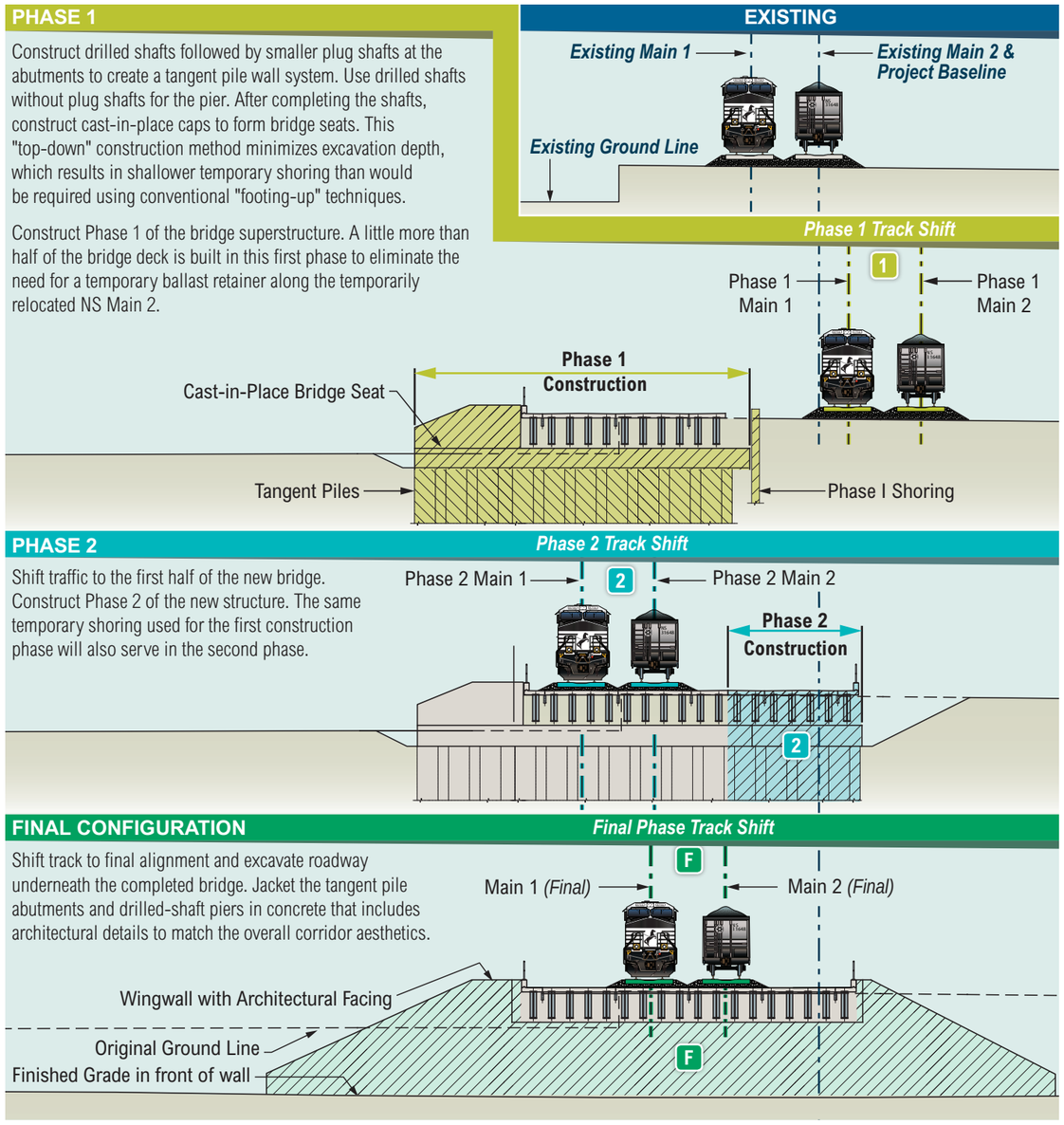
Figure B.7 Track Relocation, Phasing, and Tie-ins.



Multi-Phase Bridge Construction

The Walsh DBT will construct the new Norfolk Southern bridge over OH-10 in two phases (**Figure B.8**) using a top-down construction method that allows the new structure to be built with minimal temporary shoring. With this construction method, excavation for OH-10 will not affect rail traffic once it has been relocated to the new bridge.

Figure B.8 Multi-Phase Bridge Construction (viewing west for all phases).



Utility Coordination/Relocation

Several buried fiber-optic cables run parallel to the Norfolk Southern Mainline. These cables will be relocated to the new bridge after the second phase of superstructure construction and before excavation for OH-10. Similarly, the existing railroad communication cables will be accommodated via conduits attached to the new bridge or via conduits located in the bridge parapets, per Norfolk Southern requirements. The Walsh DBT will abandon a water line serving a vacated property prior to OH-10 excavation.

Other communication utilities that are to be designed and relocated by Norfolk Southern are Level 3 Communications, Thoroughbred Technology and Telecommunications (T-Cubed), Spread Networks, and Windstream. Utilities responsible for their own design and relocation on Norfolk Southern property are Verizon and Century Link. These lines will also be shifted after the bridge is completed.

Our experience from previous work with these utilities has demonstrated that planning these relocations early and "locking-in" fiber optic splice windows and cut-over times will greatly reduce schedule risk. DB Utility/Rail/City Coordinator Mark Hedrick will work with Robert Ballard, Joseph Abruzzo, Patrick Porzillo, and Ed Adamczyk to coordinate the utility relocation in this area with the utilities, structure, and rail design. Mark will communicate our CPM Project Schedule with Norfolk Southern to coordinate dates for railroad forces to relocate their own utilities, such as signal, interlocking, and communication cables and facilities.

Drainage

Locating viable outfalls to discharge was challenging in this location due to the cut condition of the OH-10 underpass. The RFP concept plans convey the flow 1,000 feet to the north within a drainage easement along the Norfolk Southern Mainline tracks, which ultimately discharge on the opposite side of the Norfolk Southern Nickelplate Line into an existing 48-inch brick combined sewer. The Walsh DBT identified and developed two viable alternatives for outletting the approximately 10 acres of surface drainage in this area, while eliminating the jack and bore condition under the Norfolk Southern Mainline tracks:

Alternative 1: Convey the flow 1,375 feet to the east within the roadway right-of-way and discharge from a proposed a 42-inch trunk line to an existing 60-inch brick combined sewer within the intersection of OH-10 and Buckeye Road.

Alternative 2: Convey the flow 1,000 feet to the east within the roadway right-of-way and outlet to an existing 77-inch brick combined sewer within the intersection of OH-10 and East 79th Street.

Alternative 1 was chosen because it provides the most added value: eliminates the need for the ODOT-acquired right-of-way, streamlines coordination with Norfolk Southern by eliminating the need to jack and bore under the railroad, and allows easier access for construction and future maintenance.

Other Potential Risks

The major risks associated with Norfolk Southern Mainline grade separation are discussed above. Other less likely risks may have an impact on Project construction as well. These risks and proposed mitigation are presented in **Figure B.9**.

Figure B.9 Other Norfolk Southern Mainline Grade Separation Potential Risks.

RISK	MITIGATION
Delay in obtaining Norfolk Southern design approval	► Include sufficient time in Project schedule to allow for Norfolk Southern review ► Propose over-the-shoulder reviews ► Committed personnel with 20 or more years of experience working with Norfolk Southern on bridge design and repair projects
Encountering unknown contaminated soils during excavation	► Conduct pre-planning to have established solutions ► Follow applicable regulations to properly handle and dispose of contaminated soil
Encountering unanticipated utilities	► Perform subsurface utility exploration during design phase to identify possible conflicts
Delay in Norfolk Southern track work	► Invite Norfolk Southern to progress meetings and communicate schedule needs early and often

East 55th Street Grade Separation

Ken Wells and Robert Ballard will lead the East 55th Street grade separation design effort, with key support from each Discipline Lead Engineer, including Lead Aesthetics Manager Craig Richardson, Lead Maintenance of Traffic Engineer Patrick Gibbons, and Lead Traffic Control Engineer Dan Jozity.

This grade-separated intersection will be an entry point to a revitalized section of Cleveland that brings together multi-modal transportation and a walkable community with the new development. The intersection will also play a vital role in bringing opportunities to businesses and residents, and providing much needed access to University Circle.

Regulator Coordination

The Walsh DBT understands the significant time and effort invested by the NEORSD to evaluate the most feasible alternatives for each combined sewer overflow (CSO) to meet the USEPA Consent Decree requirements. NEORSD's current Advanced Facilities Plans identify the recommended solution for each item in the Consent Decree, including those sewers impacted by OC3. NEORSD has strict compliance goals for the CSOs, so any modifications to OC3's drainage area patterns and connections need to be reviewed and approved by NEORSD.

Lead Utilities Engineer Ed Adamczyk and the regulator design team have reviewed the InfoWorks ICM models to ensure our design meets or exceeds NEORSD's requirements. Our design adheres to their standards and protocols for modifications to the models and addresses the Project's impact to NEORSD's collection system. In addition, the Walsh DBT understands the detailed documentation that must be submitted to gain approval prior to construction.

NEORSD developed a feasible alternative that relocates Regulator S-10 south on East 55th Street approximately 300 feet and abandons the stretch of 78-inch and 96-inch diameter sewers between the existing regulator and the relocated regulator. Walsh DBT's design relocates Regulator S-10 only 200 feet south of the existing site (**Figure B.10**). This design refinement limits the extent of required excavation and minimizes the amount of existing infrastructure that needs to be removed and relocated. Our design accommodates the requirements for new piping and maintains uninterrupted flows in the existing brick sewers during construction. The relocated Regulator S-10A will control overflows up to NEORSD's Storm 91.

Relocation of the regulator structure will occur before the start of bridge construction to allow the existing 96-inch and 78-inch brick sewers to be abandoned. Once the new regulator is in place, the existing regulator will be taken out of service to accommodate the new bridge construction.

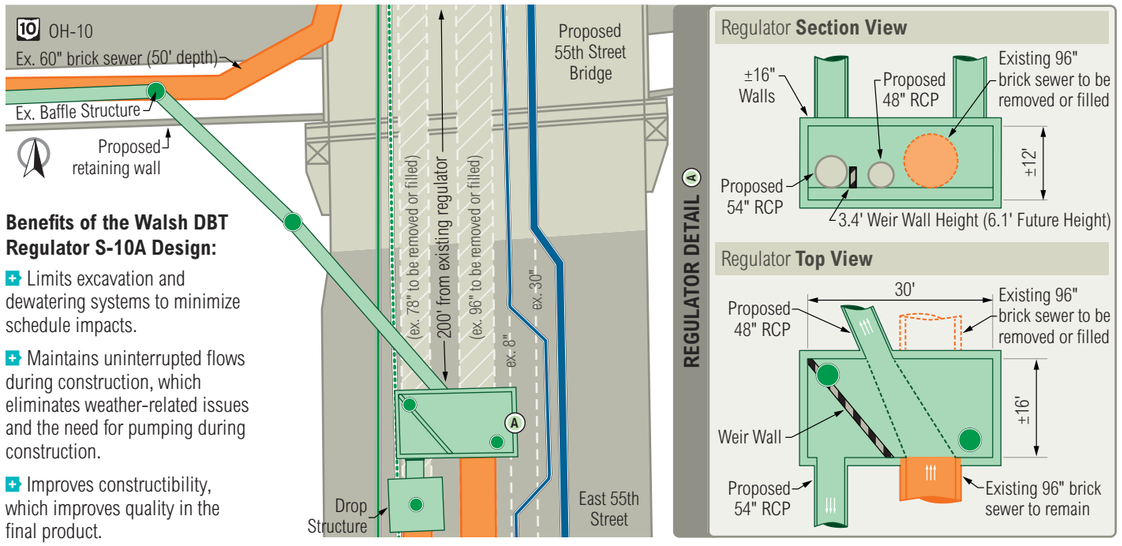
Utility Coordination/Relocation

Utilities in this area are numerous and densely packed, and will involve coordination with eight utility companies. **Figure B.11** depicts the utility locations and existing and proposed conditions. Mark Hedrick, along with Ed Adamczyk and the design team, will coordinate the design and implementation of the temporary and permanent utility relocations at East 55th Street, including these major tasks:

- Temporary relocations of private utilities including a duct bank and overhead lines, two gas mains, and a fiber optic line. These relocations allow construction of the temporary run-around, the regulator, the East 55th Street bridge, and retaining walls.
- Temporary relocation of the 16-inch sludge force main, 8-inch water main, and 30-inch water main to construct the new regulator and associated conduits. These temporary relocations will be located to the east of the proposed bridge and performed prior to constructing the run-around.
- Temporary relocation of two duct banks around the proposed bridge while maintaining power to the GCRTA substation.
- After the bridge is constructed, permanent relocation of eight utilities through the bays created by the beams on the underside of the superstructure.

Our optimized relocation design allows for permanent valves in the mains to temporarily isolate the bridge area that will be reused for the final relocation, and minimizes the relocation lengths and cut-over times for the utility companies.

Figure B.10 Regulator S-10A The Walsh DBT optimized regulator design provides for a constructible structure while maintaining function.

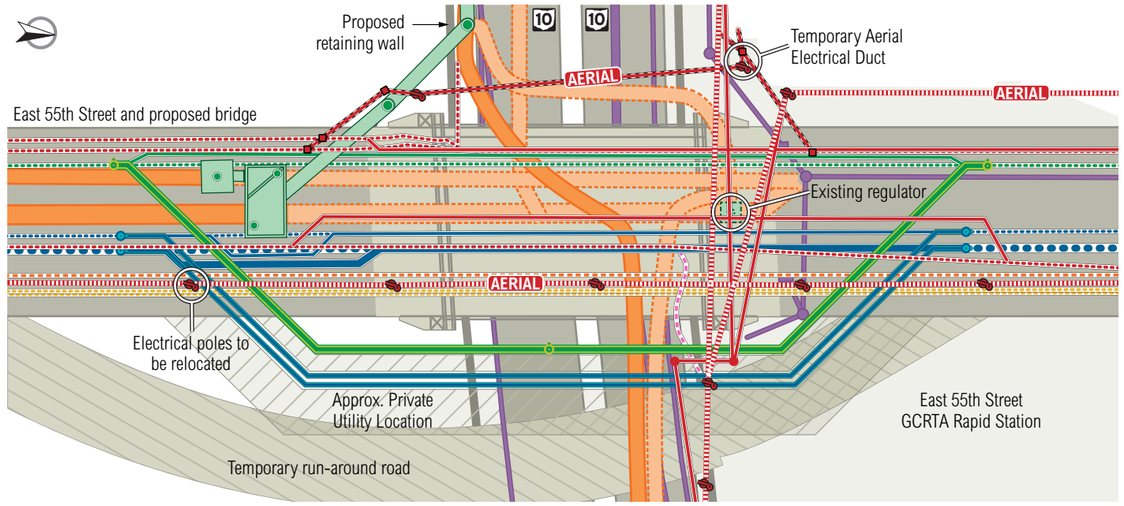


Benefits of the Walsh DBT Regulator S-10A Design:

- Limits excavation and dewatering systems to minimize schedule impacts.
- Maintains uninterrupted flows during construction, which eliminates weather-related issues and the need for pumping during construction.
- Improves constructibility, which improves quality in the final product.

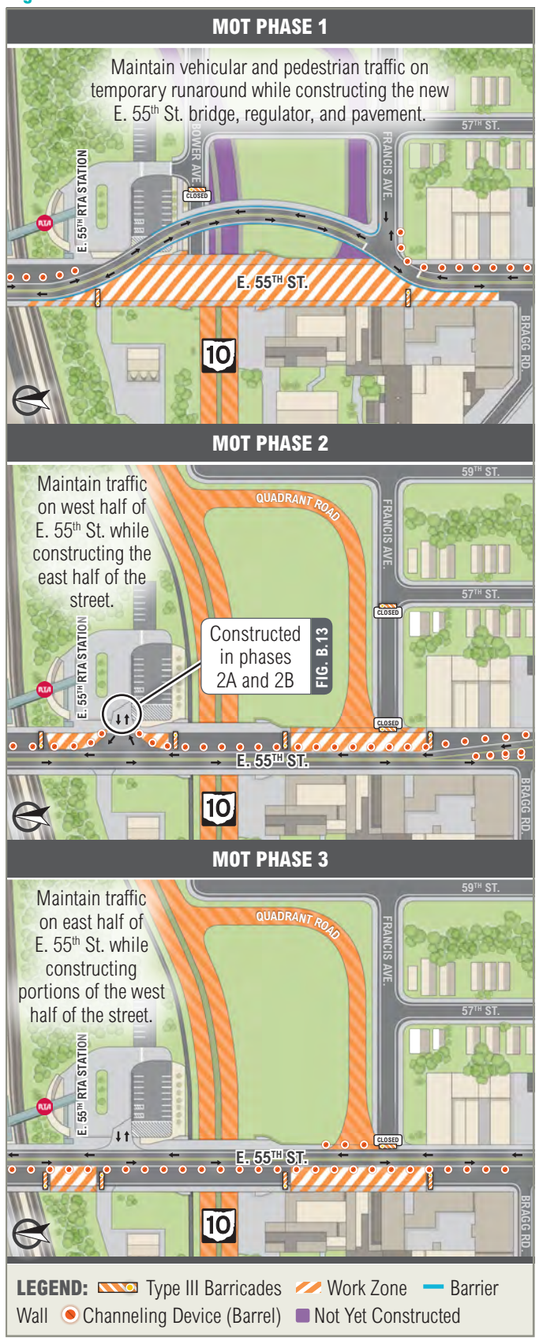
PROPOSED: Sanitary RCP including Regulator S-10A · 16" Sludge Sanitary FM · Manhole · 30" Water Main · 12" Water Main
EXISTING: 60", 78" & 96" Brick Sewer to Remain · 16" Sludge Sanitary FM

Figure B.11 Utility locations at East 55th Street and OH-10. Utilities in the area of East 55th Street are densely packed and will involve extensive utility coordination.



PROPOSED: Sanitary RCP including Regulator S-10A · 16" Sludge Sanitary FM · Manhole · Storm Drainage · 30" Water Main · 12" Water Main · Electrical Duct · Temporary Electrical Duct · Temporary Road · Temporary Water · Temporary Sludge
EXISTING: 60", 78" & 96" Brick Sewer to Remain · Electrical Pole · Aerial Electrical · 16" Sludge Sanitary FM · Sewer to be Removed or Filled · Electrical Duct · Telecom/Fiber Optic · Gas · 8" Water Main · 30" Water Main · Regulator · Approx. Private Utility Location

Figure B.12 Maintenance of Traffic for East 55th Street



Maintenance of Traffic on East 55th Street and to the East 55th Street GCRTA Station

Lead Maintenance of Traffic Engineer Patrick Gibbons designed an MOT plan for East 55th Street and the East 55th Street GCRTA Station that maintains safety for pedestrians and motorists, maintains safe vehicular traffic flow, and separates the interface of construction activities at the intersection.

Figure B.12 illustrates the three maintenance of traffic phases for East 55th Street to allow bridge construction. These three phases include:

- **Phase 1:** Maintain traffic on two-lane temporary run-around while constructing the new bridge, regulator, and pavement.
- **Phase 2:** Maintain traffic on western half of East 55th Street to construct eastern half of the roadway.
- **Phase 3:** Maintain traffic on eastern half of East 55th Street to construct western half of the roadway.

The Walsh DBT will maintain constant, safe pedestrian and vehicular access to the East 55th Street GCRTA Station. The run-around will temporarily disable five parking spots. To address this issue, the Walsh DBT will construct six alternate parking spots in a temporary parking area east of the existing lot. This parking will be constructed to provide permanent parking following construction. After the run-around is no longer needed, we will rehabilitate the portions of the parking lot used and restore the original five parking spots, while maintaining continuous access to the station (**Figure B.13**).

Drainage of the Intersection

The East 55th Street site is difficult to drain by gravity due to a cut section of nearly 25 feet, an existing water table that is over 10 feet above the proposed pavement elevation, and soils that may require undercut and/or over-excavation based on the conditions during proof rolling. The RFP concept design indicates that a watershed area of approximately 20 acres drains to an existing concrete box sewer located over 800 feet to the west within existing ODOT right-of-way.

Although the existing outlet is of sufficient depth to discharge the proposed storm sewer in the low area, the required depth of the overall system would be cost-prohibitive and difficult to maintain. Therefore, we have located another outfall within 50 feet of the low point and intend to outlet the storm sewer system to an existing 60-inch combined sewer that is of sufficient depth to outlet by gravity. This alternative outfall is ideal since it can be used for both the temporary and permanent drainage conditions.

Walsh DBT's pavement drainage layout remains the same as the RFP concept and provides inlets at the low point along with additional flanking inlets required to pass the 50-year hydraulic grade line. An underground detention system is used within the existing shoulder area along I-490 and OH-10 from Sta. 21+40 to Sta. 23+00 to eliminate the need for the RFP-proposed 11-foot inline pipe. This system provides a shallower detention facility with safer access, easier maintenance, and an overall more efficient design.

Bridge Design

East 55th Street over OH-10 is a single-span, 106-foot bridge that carries four lanes of traffic plus a center turn lane, an 8-foot-wide sidewalk on the west side, and a 17-foot-wide sidewalk on the east side. The superstructure is composed of a composite reinforced concrete deck with eleven 54-inch-deep prestressed concrete girders. Eight different utility lines will be supported by the girders underneath the concrete deck.

The superstructure will be supported on semi-integral abutments founded on secant pile walls. The secant pile walls are composed of 4-foot-diameter drilled shafts spaced at 6-foot centers with 30-inch-diameter plug drilled shafts in between. The secant pile walls serve to support the bridge abutments and perform as a retaining wall to allow for top-down construction to accommodate the deep cuts and high water table.

As the gateway for OH-10, aesthetic treatments will be incorporated on this bridge, including decorative light poles and pilasters, vinyl coated protection fence, recessed panels, decorative parapets and abutments, and various colored surface seal and stain treatments.

Other Potential Risks

The Walsh DBT has described some of the major risks associated with construction of the East 55th Street grade separation. Other less likely risks may also have an impact on Project construction. These risks and proposed mitigation are presented in **Figure B.14**.

Figure B.13 Maintenance of Traffic for East 55th Street GCRTA Station (reflects MOT Phase 2 for East 55th Street)

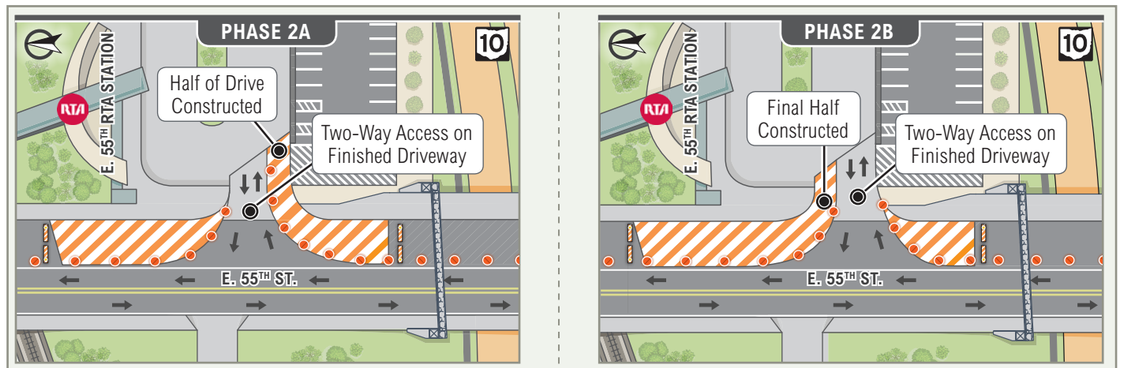


Figure B.14 Other Potential Risks.

RISK	MITIGATION
Re-tie into lines from regulator structure	► Excavate using OSHA-approved methods ► Pipe line using approved NEORSD method to protect existing brick
Tie in at 30-foot-deep storm system	► Modify design to outlet to existing 60-inch combined sewer system at Sta. 25+77.13, 55.69-foot RT
High negative pore water pressure of existing soils on proposed pavement for East 55th Street underpass area	► Install additional deep pipe underdrains for 200 feet in either direction from the low area to adequately drain the subgrade and to maintain the structural integrity of the proposed pavement

C. CONSTRUCTION

The Walsh Design-Build Team
Walsh | Parsons | American Structurepoint | G. Stephens

Part C. Construction

The members of the Walsh DBT have a successful track record of completing high-profile projects in urban environments and meeting owner goals. Drawing from this past experience and Walsh's experience on Innerbelt CCG1, the Walsh DBT has developed a construction plan for OC3 that provides an efficient construction sequence, minimizes disruptions to the public, promotes safety and quality, and delivers a successful project 31 days ahead of schedule. The Walsh DBT will achieve Substantial Completion by October 1, 2021.

Construction Organization and Key Personnel

DB Construction Project Manager, Scott Febus, will lead a team of construction professionals (**Figure C.1**) with experience from similar projects to carry out construction. Scott's resume is provided in **Part F.4** and his experience and management approach is briefly described below.

DB Construction Project Manager Scott Febus

Scott has over 42 years of construction experience. As a longtime resident of Northeast Ohio, he has worked on numerous ODOT projects throughout his career, many in the Cleveland area. Over the past 12 years with Walsh, Scott has served in similar roles on projects with tight schedules and high public interest, including Innerbelt CCG1. Highlights of Scott's qualifications as DB Construction Project Manager for OC3 include:

- **Extensive Ohio construction experience and local relationships:** Through his work in the area, Scott is familiar with the local workforce, subcontractors, utilities, railroads, and other stakeholders.
- **Team experience:** Scott has experience working with personnel assigned to OC3 including Key Personnel John Tracy and Mark Hedrick, and additional staff Margaret Yanosko, Paul Bitters, Duane Leiby, Jeff Ziegler, and Joe Wilson, who all worked together on Innerbelt CCG1.
- **High-profile design-build experience:** Scott has served in similar roles on projects, including Innerbelt CCG1, the Pennsylvania Rapid Bridge Replacement Program P3, and the Ohio River Bridges East End Crossing P3.

Construction Management Approach Resulting in a Successful Project

Scott will actively manage the overall construction of OC3 including all structures, retaining walls, and roadway items. He will be co-located full-time for the Project's duration. His approach to managing the successful execution of the Project includes:

Prioritizing safety and quality to deliver a high quality Project with zero lost-time incidents. While safety and quality are independently managed, everyone on the site is responsible for safety and quality and is empowered with stop work authority. Scott will support that message throughout the organization, including spearheading efforts to engage subcontractors and trainees. Scott will continuously communicate with Safety Manager Michael Axton and Construction Quality Manager Luke Wilson.

Integrating the construction team with the design team to deliver a solution that provides best value. Scott will collaborate with DB Project Manager John Tracy, DB Design Manager Tom Gandolfi, and DB Coordinator Matt Filipowski, to provide an integrated and coordinated effort. Scott and other members of the construction team will be involved in over-the-shoulder constructibility reviews and advise the design team on efficient construction methods. This proven approach facilitates design innovation and construction details to improve the schedule and minimize public impacts.

Managing subcontractors and workforce to deliver a positive economic impact to the community and maximize team diversity. Subcontractors, especially those who are new to this type or size of project, require special attention to be certain of success. Scott will assign a project engineer to each

Figure C.1 Construction Staff. Scott Febus leads a construction team that includes experts across all disciplines needed to successfully execute the construction for OC3 and achieve zero lost time incidents.

Cleveland Construction Experience. The Walsh DBT's construction staff includes personnel with experience constructing large, urban projects in Cleveland. For this project, we have provided six Innerbelt CCG1 team members, with a combined 125 years of experience, to return and construct the OC3 corridor. To benefit the Project, we will optimize this first-hand knowledge, technical expertise, and proven construction methods.

SURVEY CONSTRUCTION MANAGER
Duane Leiby
27 Years' Experience • ODOT DB Experience

Duane has 27 years of experience including the Innerbelt CCG1 DB and the PA Rapid Bridge Replacement P3. He will coordinate with the Lead Surveyor to provide building, structure, utility, and critical location survey in compliance with ODOT's Survey Manual and will maintain all necessary field notes, documentation, found monumentation, and adjustment factors/methods. All survey data will be submitted using ODOT's field codes and GEOPAK standard mapping codes.

LEAD ROADWAY CONSTRUCTION MANAGER
Jeff Ziegler
6 Years' Experience • ODOT DB Experience

Jeff has 6 years of experience managing roadway construction operations on the Innerbelt CCG1 DB and the PA Rapid Bridge Replacement P3. For the Project, he will direct operations and construction activities as they relate to roadway construction and coordinate with the Roadway Superintendent. This includes monitoring roadway related materials and equipment, managing timelines and progress reports, and coordinating and supervising roadway subcontractors.

LEAD STRUCTURES CONSTRUCTION MANAGER
Guido Bevilacqua
13 Years' Experience • ODOT DB Experience

Guido has over 13 years of experience coordinating complex structure construction on large-scale Ohio projects, including the Innerbelt CCG1 DB and the 535-03 SR 193 Bridge Replacement. He will coordinate structural construction activities with the Structures Superintendent for the development of work safety plans, to manage daily field operations, and to ensure all superstructure staffing needs are met.

WORK ZONE TRAFFIC SUPERVISOR/ENG. MANAGER
John Krebbs
5 Years' Experience • DB Experience

John's 5 years of experience working for INDOT and as maintenance of traffic manager on past projects will benefit him in this role. He will be responsible to coordinate/monitor all DBT MOT activities, oversee installation of traffic control devices and traffic phasing as well as provide operations summaries, traffic control reports, and notification of MOT durations. He will be available 24 hours per day, seven days per week for the duration of construction.

PROJECT CONTROLS MANAGER
Joe Wilson
12 Years' Experience • ODOT DB Experience

Joe has over 12 years of experience on high-profile projects with a history of serving similar roles on the Innerbelt CCG1 DB and the Pennsylvania Rapid Bridge Replacement P3. For the Project, he will supervise logistics and equipment operations and oversee the document control manager. He will also handle procurement and administration of subcontracts and purchase orders, provide CPM Project Schedule support, and assist with subcontractor/supplier coordination.

GENERAL SUPERINTENDENT
Paul Bitters, STSC
30 Years' Experience • ODOT DB Experience

Paul served as the superintendent on Innerbelt CCG1 DB, the ORB Downtown Crossing DB, and ORB East End Crossing P3. He has a history of leading crews in the safe performance of field activities under accelerated schedules in urban environments. For the Project, he will be responsible for the DBT's overall field operations and scheduling of materials, equipment, resources, and subcontractors and will oversee the roadway, foundations, and structures superintendents.

ROADWAY SUPERINTENDENT
Clay Clark, STSC
22 Years' Experience • DB Experience

Clay has 22 years of experience including serving similar roles on the ORB Downtown Crossing DB and East End Crossing P3 projects. For the Project, he will focus on roadway construction, roadway subcontractor management, plan review for constructibility, and provide input to the General Superintendent for activity scheduling to ensure smooth operations as they relate to roadway.

FOUNDATIONS SUPERINTENDENT
Roddy Eyres
29 Years' Experience • DB Experience

Roddy brings 29 years of experience with similar roles on projects including the ORB Downtown Crossing DB. For the Project, he will focus on foundation construction (drilled shafts, pile driving, secant piles, and footing operations) and provide foundation subcontractor management, plan review for constructibility, and input to the General Superintendent for activity scheduling to ensure smooth operations as they relate to foundations.

STRUCTURES SUPERINTENDENT
Adam Johns
20 Years' Experience • DB Experience

Adam has 20 years of experience in similar roles on projects including the ORB Downtown Crossing DB and the I-65/SR 26 DB in Indiana. For the Project, he will focus on structures construction, structures subcontractor management, plan review for constructibility, and provide input to the General Superintendent for activity scheduling to ensure smooth operations as they relate to structures.

subcontractor to provide daily guidance. He will have assistance from Halle Jones Capers and Brenda Wolf in assuring workforce and OJT goals are being met and NSLE firms are provided the assistance they need to succeed on the Project.

Realistic scheduling to minimize the duration of traffic impacts and open all roadways to traffic no later than October 1, 2021 to achieve early substantial completion. Scott will continuously monitor the schedule to ensure that we meet milestones. Margaret Yanosko, a Case-Western University engineering graduate and Innerbelt CCG1 alumni, will serve as the Project Scheduler and work with Scott to ensure scheduling is managed with necessary resources.

Implementing a sustainability plan to achieve INVEST Silver for OC3. Scott will work with Margaret Hewitt to implement the Walsh DBT's sustainability plan to achieve the guidelines for aesthetics and sustainability. Our team's experience using INVEST will help us identify successes and potential areas of improvement. As demonstrated on Innerbelt CCG1, we will focus on the "Green 7" categories to provide a framework that relates statistics and successes to ODOT.

Partnering with ODOT, City, and Stakeholders to be able to expedite demolition and other critical activities. Scott will collaborate with John Tracy and ODOT's project engineer to facilitate owner involvement in field operations and provide transparent construction. Construction staff will work with Mark Hedrick to coordinate and expedite any demolition operations required by the Project and coordinate with utilities, the City of Cleveland, GCRTA, and Norfolk Southern (NS). David Bennett will lead the team's efforts to provide accurate and timely information to all stakeholders regarding critical activities.

The Walsh DBT's management approach will result in a successful project through:

- **Experience:** Drawing on the experience and lessons learned by our team to develop an effective Project Management Plan.
- **Clear Expectations and Communication:** Creating an environment of clear expectations and open communication to implement the Project Management Plan.
- **Monitoring Progress:** Actively monitoring OC3 progress to quickly react to any issues that may arise.

Construction Approach and Risk Avoidance/Mitigation

The Walsh DBT will plan every Project aspect to provide a clear understanding of our approach to all involved parties. This approach will promote an environment where safety and quality are planned into the work and risks can be avoided or mitigated.

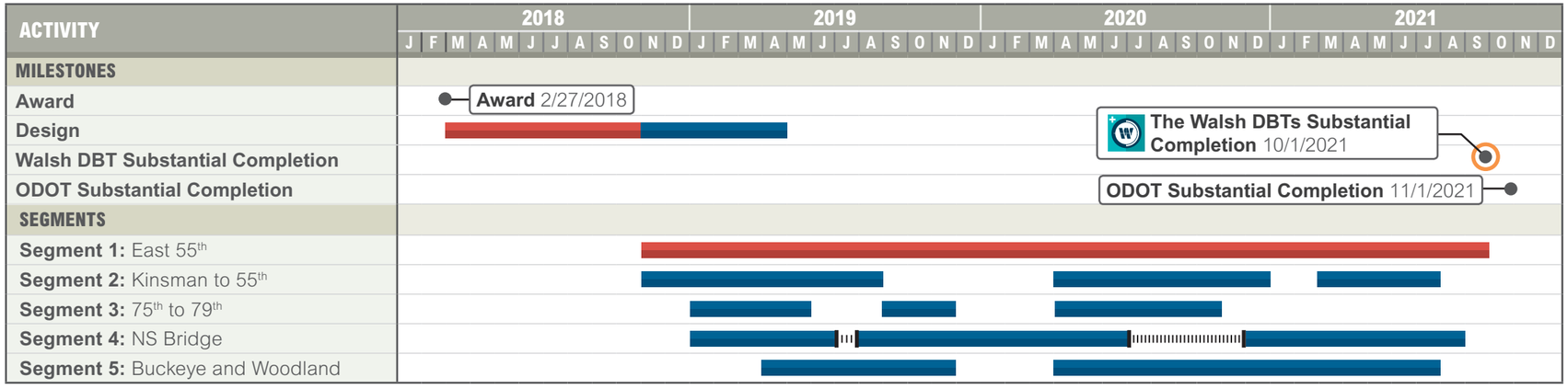
For construction planning and scheduling, the Walsh DBT has divided the Project into five major construction segments. **Figure C.2** illustrates the segments with a summary-level schedule highlighting critical activities for each segment. Segments were selected to promote the balancing of resources throughout the design and construction phases, develop appropriate scopes of work for NSLEs, and minimize traffic impacts. We also considered construction access, traffic control restrictions defined in the Project Scope, utility relocations, and additional time needed for design and construction associated with the GCRTA and NS railroads.

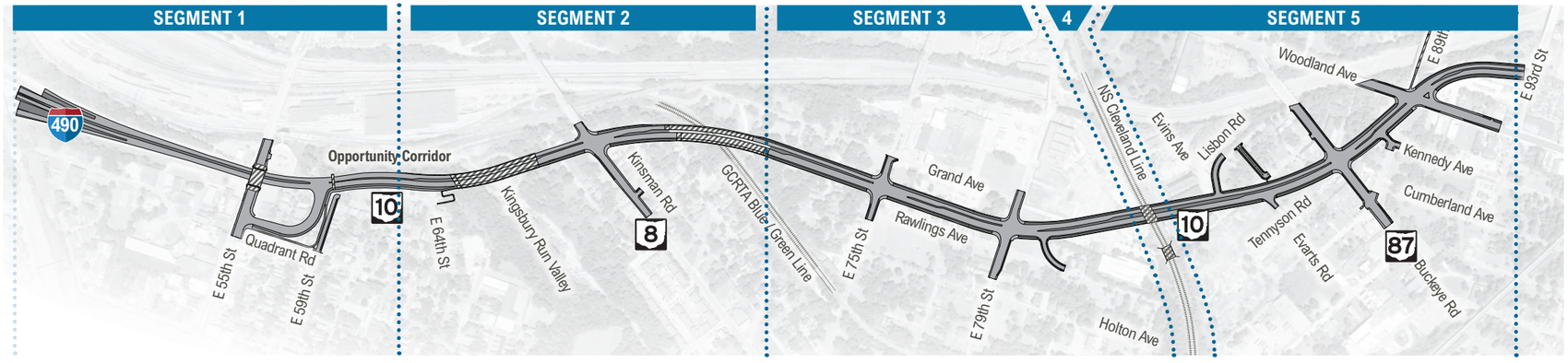
Resources

The Walsh DBT has evaluated our current and projected workload and backlog to ensure adequate equipment, material, and personnel resources. We are prepared to dedicate the necessary staff, manpower, facilities, and equipment to complete OC3 on time.

- **Readily-Available Workforce:** The Walsh DBT has available for this Project experienced, well-trained superintendents and foremen to manage trade labor forces. Our discipline construction managers will monitor the CPM Project Schedule for long-range labor planning and provide three-week schedules to field supervision for short- and mid-term planning.
- **Equipment Resources:** Walsh has an extensive in-house equipment fleet valued at over $575 million, which includes roadway and bridge specific equipment, such as pavers, cranes, and dozers. Walsh will use a sophisticated equipment management system to schedule the necessary equipment for all self-performed work. For scopes of work not self-performed, we will ensure adequate resources are available to complete the work.

Figure C.2 The Walsh DBT's Five-Segment Approach. We have divided the Project into five segments to balance resources, minimize public impacts, and ensure quality results.





- **Subcontractor Resources:** The Walsh DBT recognizes the importance ODOT has placed on NSLE participation for this Project. Our proposal includes commitments to NSLE firms, and we will continue efforts to include additional participation throughout the Project's duration. Final subcontractor and supplier selection for procurement will be based on value added to the Project. The Walsh DBT will evaluate these subcontractors and suppliers on their ability to provide a quality product safely within the time frames scheduled. The Walsh DBT will provide detailed planning and management of all subcontracted work to ensure timely performance.

The CPM Project Schedule will be continuously monitored and updated (**Figure C.3**) and used as a tool to communicate expectations to all involved parties—ODOT, Walsh DBT member firms, subcontractors, third-party utilities, and others. At each stage of schedule development, we will consider labor availability and resources, possible risks associated with the work, and workforce and public safety. We will prepare, control, and update the CPM Project Schedule to manage all design and construction activities.

For each of the five segments, the Walsh DBT has determined manpower, equipment, and subcontractor needs. This has been integrated into the CPM Project Schedule and our Construction Plan.

Construction Quality

Similar to safety, quality is the responsibility of everyone associated with the Project. Quality is part of Walsh's culture established by executive management and implemented by the Project staff. Beginning with Project orientation, the Walsh DBT will empower all employees with stop work authority to review quality and safety concerns.

Construction quality begins during the design phase through the design quality process, which includes Task Force meetings, interdisciplinary reviews, constructibility reviews, technical coordination reviews, and QA audits. Constructibility reviews conducted during design development enable us to incorporate practical construction methods into the plans. This construction staff input into the design reduces the potential for rework and eases the transition from design into construction. Construction quality is then carried through every aspect of the work. This includes:

- **Quality leadership** with Luke Wilson as our Construction Quality Control Manager.
- **Workplan development** using three-phase control to foster continuous improvement (**Figure C.4**).
- **Subcontractor quality performance** held to the same standard as that of our own forces.
- **Testing, inspection, and monitoring** incorporated into the CPM Project Schedule.
- **ODOT/QAM involvement** throughout planning and construction.

Skillful Quality Leadership

Luke Wilson, Construction Quality Control Manager, will implement quality planning and oversee the Walsh quality management process. He will be responsible for developing, reviewing, approving, implementing, and maintaining the Construction Quality Management Plan (CQMP); communicating design and construction requirements to the entire Project team; and conducting initial and follow-up training for team members including subconsultants, subcontractors, and suppliers. In addition, Luke will lead weekly Quality Toolbox Talks. These talks serve as an educational tool for construction crews and introduces quality management initiatives and best practices. Luke reports directly to Project Executive, Brad Koester, ensuring quality independence from production construction staff.

Luke led the entire quality team for the recently completed Ohio River Bridges East End Crossing P3 where Walsh self-performed all quality assurance and quality control. The project incorporated a strong quality culture and proven tools and processes to measure successful quality performance. Luke will bring these tools and lessons learned from that experience to OC3.

Workplan Development

Concurrent with final stages of design, Scott Febus, Luke Wilson, Matt Filipowski, and Paul Bitters will work together to identify major definable features of the work (DFOW). For each DFOW, the team will prepare a construction workplan that includes the scope and sequence of work, equipment and tool needs, material requirements, applicable drawings and specifications, quality control and safety requirements, and production reporting, schedule, and pertinent contact information.

Prior to starting work, a preparatory meeting will be held to review the workplan, ensure that requirements are being met, and confirm progress for each planning item. ODOT's involvement during these meetings will support the Walsh DBT's "no surprises" approach, where the entire team agrees on the documented plan. At this stage, we will also confirm that required submittals have been approved.

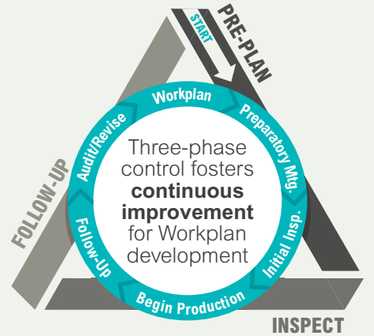
During production, the foremen will review the workplan with crews performing the work to add any important group comments. Each day, foremen will refer back to the workplan to fill out the Task Quality Analysis (TQA) worksheet, which will then be reviewed by the crew in the field. This additional step functions as a daily planning tool and quality check. Any comments will be added to the form as necessary. Workplans will then be updated weekly with comments or revisions to ensure that quality performance is achieved through continuous improvement.

Subcontractor Quality Performance

Subcontractors, suppliers, and materials will be selected on the best combination of safety, quality, and value with the goal of preventing quality issues. Each subcontractor will be assigned a Walsh DBT manager who will oversee the subcontractor's work to ensure compliance with the provisions of the contract, distribute information regarding plan updates, coordinate and review shop drawings, and process required quality control documentation. The subcontractors will be included in coordination meetings and planning sessions. They will be held to the same safety, quality, and environmental standards as the Walsh DBT.

Figure C.3 Monitoring Resources. The Walsh DBT will use the CPM Project Schedule to monitor long-term resources and use look-ahead and daily schedules to plan short-term needs.

Figure C.4 Three-Phase Quality Control.



Pre-Plan Phase: Review applicable specifications and contract drawings • Check materials/equipment have been tested, submitted, and approved • Verify required quality standards and checks • Examine work area • Verify quality checkpoints • Physically examine required materials, equipment, and sample work • Review safety hazard analysis • Instruct applicable workers on acceptable level of workmanship • Discuss planned method/sequence of construction and procedures • Check to ensure workplan has been accepted by ODOT (if required)

Inspect Phase: Check safety to include compliance with the updated Safety Plan and activity hazard analysis • Check completed work to ensure compliance with contract • Verify full contract compliance of required testing • Review applicable standards, requirements, and procedures • Submit documentation

Follow-Up Phase: Perform daily check to maintain compliance • Conduct final follow-up check • Correct any deficiencies prior to start of additional work that may be affected

Testing, Inspection, and Monitoring

Luke will oversee quality control testing, inspection, and monitoring to ensure that Project requirements are met or exceeded. The Walsh DBT understands the importance of early coordination regarding quality-related hold points and will include these items in the detailed CPM Project Schedule.

ODOT/QAM Involvement

Producing a quality Project will be the result of successful partnership between ODOT/QAM personnel and the Walsh DBT. Throughout planning and construction, ODOT/QAM personnel will be encouraged to attend regular meetings. ODOT/QAM feedback and buy-in during early Project stages will help to ensure that construction operations progress toward achieving our shared Project goals. Luke will meet with ODOT/QAM project management on a regular basis and seek feedback as it relates to the overall level of quality being delivered. This feedback will assist in analyzing the root cause of any issue and taking prompt and appropriate action to prevent recurrence.

Major Construction Work by Major Phase

On the following pages, the Walsh DBT describes our Construction Plan and strategies to meet the unique needs of each segment, including the construction concept for that segment, maintenance of traffic, risks and risk mitigation strategies, resource considerations, and approach to achieving quality results. In **Part F.7**, we have included maintenance of traffic drawings that detail phasing and detours. After award, the Walsh DBT will submit a comprehensive traffic management plan to further refine the coordination of construction traffic and property access with the traveling public. The plan will provide for the closures and additional requirements detailed in Table 20-1 of the Project Scope.

Within 30 calendar days of Notice to Proceed (NTP), the Walsh DBT will conduct an introductory briefing with ODOT, City of Cleveland, and key stakeholders to present major aspects of the Project such as scope, estimated schedule, contacts, phasing, public involvement, and communications. The Walsh DBT will coordinate with ODOT to communicate construction traffic information to the public and other affected parties as part of the Public Information Plan.

WORK ON CRITICAL PATH

Segment 1: East 55th

Encompasses the E. 55th Street intersection with I-490, including the I-490/I-77 ramps and Quadrant Road (Stations 9+00 to 39+75). Construction in this segment will be on the Project's critical path; therefore, design completion for buildable units will be a schedule priority to allow for the earliest possible start of Segment 1 construction.

Mitigating risks related to delays or schedule impacts in Segment 1

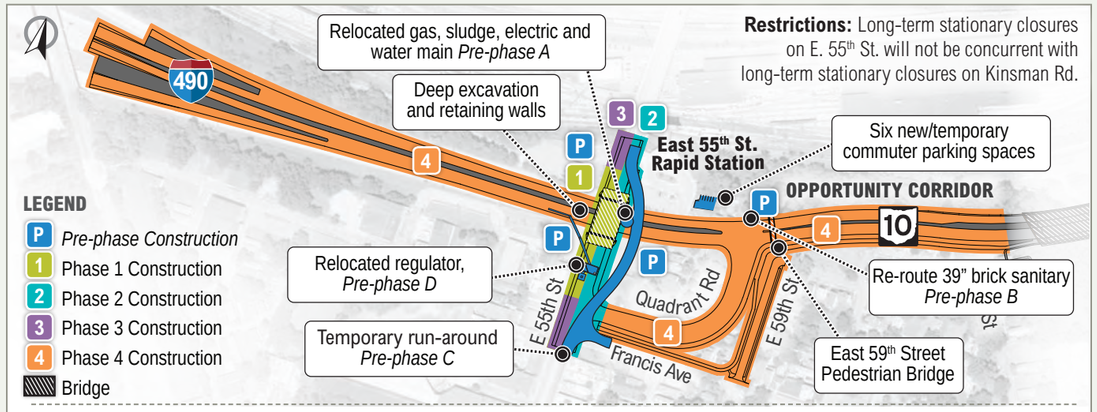
Segment 1 risks include utility relocations and the potential discovery of unknown regulated materials. Utility relocation work is one of the first activities on site. Design and coordination with utility companies will be a priority immediately upon award. To mitigate this risk, we have provided six months for design to allow utility construction to start, and 36 months for construction in the CPM Project Schedule. Our team also developed and will continue to develop 3D models to help identify and mitigate potential design conflicts with both existing and proposed infrastructure.

For unknown regulated materials, the Walsh DBT will perform soil investigations prior to the start of construction to identify risks.

Construction quality and sufficient resources

Quality Success: Unique elements in this segment are the pre-phase deep pipe work and the design and construction of retaining walls for wet conditions. Our quality team will participate in the pre-planning of this work with Project staff to ensure that all requirements are clearly understood and any specialty training and the necessary equipment are in place.

Resources: As this segment is on the critical path, resources will be continually allocated and closely monitored. For Segment 1, an NSLE contractor, Barbicas Construction, will perform asphalt paving.



Construction Sequence and Phasing

P **Complete pre-phase work using temporary lane closures as allowed in the Project Scope. Pre-phase work is completed in four sub-phases:**

A **Relocate** overhead telecommunication and electrical lines, 16-inch sludge force main, and gas lines at E. 59th St. and the E. 55th St. GCRTA Station.

B **Relocate** sanitary main along E. 57th St. **Complete** storm sewer work on E. 55th St.

C **Construct** temporary run-around and tie-ins to E. 55th St. **Place traffic** from E. 55th St. on the two-lane temporary run-around.

D **Close** I-490 and E. 55th St. starting long-term stationary B closure. **Construct** regulator structure and associated deep piping and structures.

I-490 remains closed to complete the phased construction of E. 55th St. and OH-10 in this segment. During all phases of construction, we will plan, monitor, and adjust traffic control to maintain continuous access to the GCRTA station.

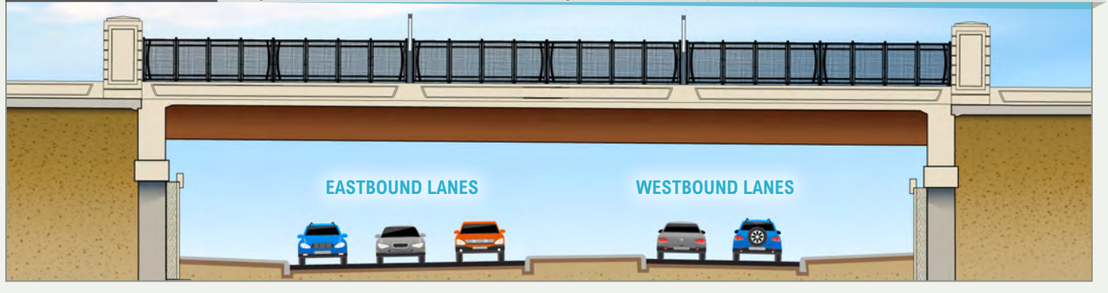
1 **Construct** SB E. 55th St. and the new E. 55th St. bridge, while traffic remains on run-around. **Begin construction** of Quadrant Rd. and the retaining walls along the new alignment of OH-10. **Install** previously relocated sludge force main and electric ducts on the new E. 55th St. bridge.

2 **Shift traffic** from the run-around to the newly constructed SB E. 55th St. **Construct** NB E. 55th St. **Continue construction** of Quadrant Rd. and the OH-10 retaining walls.

3 **Continue construction** of Quadrant Rd., the OH-10 retaining walls, and the tie-ins to Quadrant Rd. and E. 55th St.

4 **Construct** OH-10 mainline, ramps from I-490 to I-77. Completion of this phase coincides with Project completion and opening to traffic.

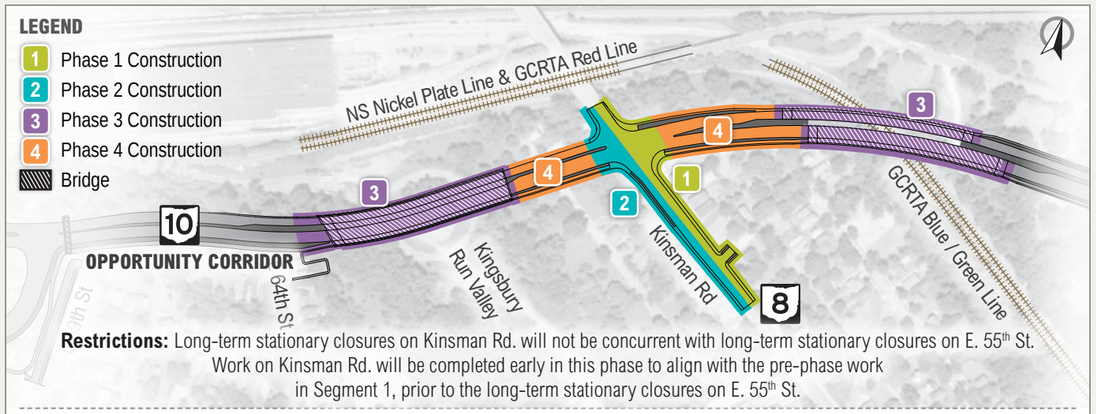
E. 55TH STREET BRIDGE Using a top down construction method, the bridge work will be completed prior to the excavation work for OH-10 below.



Segment 2: Kinsman to 55th

WORK NOT ON CRITICAL PATH

Begins at the east end of Segment 1 and continues to the east end of the GCRTA Blue/Green Line Bridge (Stations 39+75 to 63+50). Includes work on Kinsman Road and bridges at Kingsbury Run Valley, and GCRTA Blue/Green Line.



Restrictions: Long-term stationary closures on Kinsman Rd. will not be concurrent with long-term stationary closures on E. 55th St. Work on Kinsman Rd. will be completed early in this phase to align with the pre-phase work in Segment 1, prior to the long-term stationary closures on E. 55th St.

Construction Sequence and Phasing

Local road closures will be in accordance with Table 20-1 of the Project Scope and local access will be maintained as required.

1 **Install detour route signage** for Kinsman Rd. **Restrict traffic** to one lane in each direction on SB Kinsman Rd. using the allowed stationary closures. **Construct** NB Kinsman Rd. **Relocate overhead electric** to underground duct banks. **Complete watermains** adjacent to the new roadway.

2 **Shift traffic** to the newly constructed NB Kinsman Rd. **Construct** SB Kinsman Rd. **Relocate overhead electric** to underground duct banks.

3 **Construct** Kingsbury Run Valley bridge and GCRTA bridges. **Complete utility relocations** along the new alignment of OH-10.

4 **Complete** construction of the remaining OH-10 roadway from Kinsman Rd. to the Kinsbury Run Valley and GCRTA bridges.

Mitigating risks related to delays or schedule impacts in Segment 2

Segment 2 risks include coordination and work hours for the bridge over the GCRTA rail lines. Walsh DBT member firms have a good working relationship with the GCRTA and an understanding of their requirements to help mitigate this risk. DB Utilities/Rail/City Coordinator Mark Hedrick and Railroad Coordinator Michael York will work through any issues should they arise. Lane restrictions at Kinsman Road cannot occur concurrent with lane restrictions and the long-term closure at 55th street. To accommodate this provision, Kinsman Road will be constructed early in the schedule prior to the long term lane restrictions at 55th Avenue.

Construction quality and sufficient resources

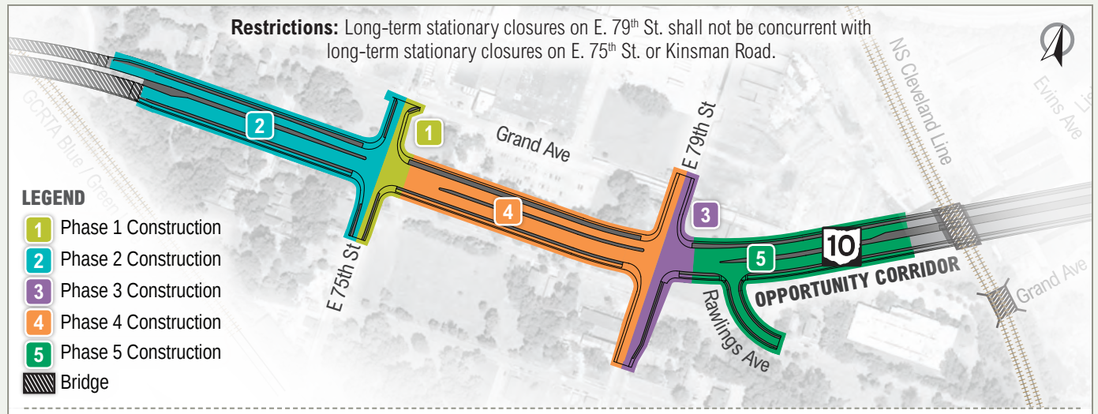
Quality Success: This segment's unique elements include steel bridge construction and painting of the GCRTA bridge. Walsh will draw upon our AISC certification to develop a steel erection plan. Our painting subcontractor will be required to submit a detailed plan to demonstrate understanding of the painting requirements while protecting the existing catenary lines. The bridges will be constructed in their entirety in one phase, which improves quality.

Resources: We scheduled this work early to balance resources between 2019 and 2020 bridge work. Resources can be shared between the Kingsbury Run Valley and GCRTA Blue/Green Line bridges. For Segment 2, NSLE contractor, JD Williamson Construction, will construct the Kingsbury Run Valley bridge.

Segment 3: 75th to 79th

WORK NOT ON CRITICAL PATH

Begins at the east end of Segment 2, continues to the west end of the NS bridge, and includes the work on E. 75th and E. 79th Streets (Stations 63+50 to 89+00). There is no bridge construction in this segment and work is not on the critical path.



Construction Sequence and Phasing

Local road closures will be in accordance with Table 20-1 of the Project Scope and local access will be maintained as required.

1 **Install detour route signage** for E. 75th St. **Restrict traffic** to one lane in each direction on SB E. 75th St. **Construct** NB E. 75th St.

2 **Shift traffic** to the newly constructed NB E. 75th St. **Construct** SB East 75th St. and OH-10 to the west limits of Segment 3.

3 **Install detour route signage** for E. 79th St. **Restrict traffic** to one lane in each direction on SB E. 79th St. **Construct** NB E. 79th St.

4 **Shift traffic** to the newly constructed NB E. 79th St. **Construct** SB E. 79th St. and OH-10 west to E. 75th St.

5 **Complete construction** on the remaining OH-10 roadway, including Rawlings Ave.

Mitigating risks related to delays or schedule impacts in Segment 3

Segment 3 risks include ensuring subcontractors perform work as needed to support the CPM Project Schedule. To mitigate this risk, the Walsh DBT will include subcontractors in all scheduling meetings. This will ensure a clear understanding and buy-in for the work. During performance of the work, progress will be closely monitored.

Parcels in this segment include known regulated materials that require removal. The Walsh DBT will follow the Spill Prevention Control and Countermeasures Plan to identify the type of removal and mitigation required. This known regulated material removal will occur early in the schedule to prevent delays later in the schedule.

Construction quality and sufficient resources

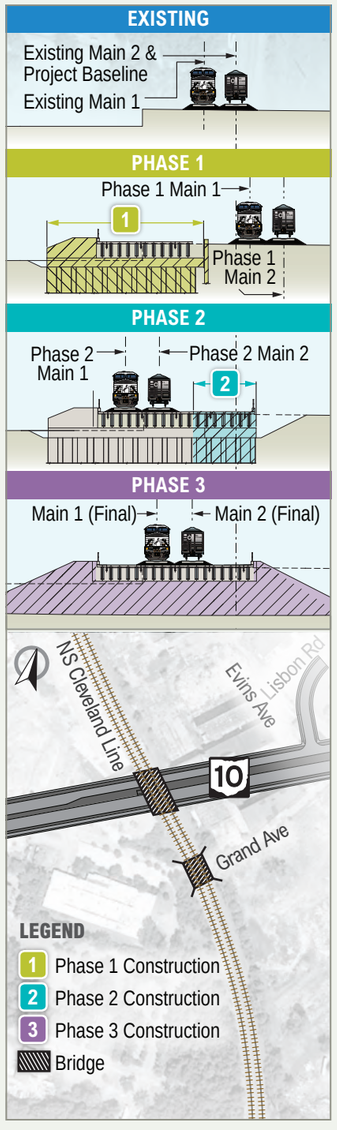
Quality Success: The majority of the work in this segment will be subcontracted. We will communicate our expectations relating to quality so that subcontractors have a thorough understanding. We will work with these subcontractors to develop their workplans and then closely monitor their performance.

Resources: This work is being scheduled early to provide three construction seasons of road work to balance resources between 2019, 2020, and 2021. This pace of work will allow for appropriately sized work packages to be created for NSLE firms, including asphalt paving for Barbicas Construction. Phases 3, 4, and 5 will be critical for the completion of work on 79th Street following the work on 55th Street in Segment 1.

Segment 4: NS Bridge

WORK NOT ON CRITICAL PATH

Includes construction of the NS Bridge (Stations 89+00 to 91+50), which will be close to the critical path depending on the approval time required by NS and the work hours permitted due to rail traffic. Work is scheduled to begin early in the Project to provide adequate time for these uncertainties.



Construction Sequence and Phasing

P **Construct** access roads into the valley for work access. **Coordinate** utility relocations provided by NS.

1 **Shift tracks** on the existing bridge to provide room for bridge construction. Construct new embankment. **Construct** the south half of the new bridge over OH-10. **Remove and fill** a portion of the existing Grand Ave. Bridge.

2 **Shift tracks** onto newly constructed south half of the bridge to provide room to construct the north half of the new bridge. **Construct** north half of new bridge over OH-10. **Fill and remove** remaining portion of Grand Ave. Bridge.

3 **Shift tracks** to final position. This completes work on the bridge and rail. **Excavate** and **construct** OH-10 alignment below the new bridge.

Mitigating risks related to delays or schedule impacts in Segment 4

Segment 4 risks include coordination and design approval from NS, and the rail line's high daily train counts. The Walsh DBT will meet with NS as soon as possible after award to gain a thorough understanding of their expectations. Design packages for this work will be a priority to get an early start on the review process. Time has been incorporated into the CPM Project Schedule to allow for slowed production due to the heavy track activity.

Construction quality and sufficient resources

Quality Success: Unique elements in this segment are the steel bridge construction and painting of the NS rail bridge. Walsh will draw upon our AISC certification to develop a Project-specific steel erection plan. We will require a detailed plan from our painting subcontractor to demonstrate their understanding of the painting requirements. We will closely monitor the progress and quality of this work.

Resources: As work in this segment is near the critical path, resources will be continually monitored and allocated to the work. Coordination with NS for rail work and utility relocations will be a critical element for the success of the work in this segment. DB Utilities/Rail/City Coordinator Mark Hedrick will lead this effort, supported by Railroad Coordinator Michael York. For Segment 4, NSLE contractor, Barbicas Construction, will perform asphalt paving.

Segment 5: Buckeye and Woodland

WORK NOT ON CRITICAL PATH

Begins at the east end of the NS bridge and continues to the east end of the Project. Includes work on Lisbon Road, Buckeye Road, and Woodland Avenue. The 89th Street pedestrian bridge construction is included in this segment.

Construction Sequence and Phasing

Local road closures will be in accordance with Table 20-1 of the Project Scope and local access will be maintained as required.

1 **Restrict traffic** to one lane in each direction on SB Woodland Ave. **Construct** NB Woodland Ave., E. 89th St., and OC-10 to the east Project limits.

2 **Shift traffic** to the newly constructed NB Woodland Ave. **Construct** SB Woodland Ave. and OC-10 to just east of Buckeye Rd., including the tie-in to Kennedy Ave.

3 **Restrict traffic** to one lane in each direction on SB Buckeye Rd. **Construct** NB Buckeye Rd.

4 **Shift traffic** to the newly constructed NB Buckeye Rd. **Construct** SB Buckeye Rd., OC-10 to the west limits of segment, Lisbon Rd., Evins Ave., and Evarts Rd.

Mitigating risks related to delays or schedule impacts in Segment 5

Similar to Segment 3, risk in this segment will include ensuring subcontractors perform work as needed to support the CPM Project Schedule and coordination with the GCRTA and NS railroad. To mitigate this risk, the Walsh DBT will include subcontractors in all scheduling meetings. This will ensure a clear understanding and buy-in for the work.

The Walsh DBT recognizes the importance of working closely with **businesses, churches, and the Kenneth L. Johnson Recreation Center** in this segment to coordinate and maintain continuous access to their facilities.

Construction quality and sufficient resources

Quality Success: Similar to Segment 3, the majority of the work in this segment will be subcontracted. We will communicate our expectations relating to quality so that subcontractors have a thorough understanding. We will work with subcontractors to develop their workplans and closely monitor performance.

Resources: Construction is scheduled to start in 2019. This will provide for the phasing of design activities and balancing roadwork resources over the duration of the Project. This pace of work will also provide proper-sized work packages for NSLE firms, including Barbicas Construction for asphalt paving.

Walsh DBT Steel Bridge Experience.

The Walsh DBT will use experience constructing the steel bridge for Innerbelt CCG1 to construct OC3's 89th Street bridge.

Safety

The Walsh DBT understands that establishing a positive safety culture leads to a safe project. We continuously challenge our management staff to make safety an integral part of the planning that goes into the design and every work activity, and focus on instilling this positive culture into everyone working on the Project. **All employees are responsible for safety and are empowered to stop work if they observe unsafe work practices.** Our greatest responsibility is the safety of the public and our workforce with our stated goal of "No One Gets Hurt!"

Site-Specific Safety Considerations

The Walsh DBT shares ODOT's goal to provide an incident-free, zero accident Project. OC3's active urban environment presents unique safety challenges that we are prepared to address **(Figure C.5)**. As highlighted in this section, we will tailor our site-specific Safety Plan to specifically address the safety needs for OC3.

Safety Leadership

Safety Manager Michael Axton will be on-site full-time during construction. Michael has been trained to provide consistent leadership and technical skill. He will develop and implement our site-specific Safety Plan, oversee training, advise on safety issues, and continuously measure performance of both self-performed and subcontracted work. Michael will report directly to the Executive Committee and coordinate with DB Construction Project Manager, Scott Febus, to establish effective methods to increase safety awareness and performance.

Responsibility and Obligation to Stop Unsafe Work. While Michael leads overall safety efforts, safety is a coordinated effort between supervisors and employees at all levels. During Project Orientation, participants receive "Stop Work Authority" cards signed by DB Project Manager, John Tracy, to reinforce their authority to stop work if they observe unsafe practices.

Michael led safety efforts on the ORB East End Crossing P3, which **achieved 1,000 days and 3.5 million man-hours with no lost time.** For that project, Michael created multiple innovative, effective safety programs he will use on OC3 such as the "Good Catch" program that rewards employees for recognizing and reporting near misses.

Public Safety Planning for OC3

With the Project corridor traversing a heavily urbanized area, Michael will work with the design and construction teams to address specific strategies in our design, construction workplans, and overall Safety Plan to keep motorists, pedestrians, and communities safe from construction operations:

Vehicular Traffic: Reducing driver confusion helps to maintain safe vehicular traffic. The Walsh DBT will use temporary traffic control devices to separate construction from motorists, minimize detour durations, and work with ODOT to alert the traveling public of MOT phase changes and alternate routes. We will monitor traffic in work zones to evaluate the effectiveness of our traffic control measures and adjust as needed.

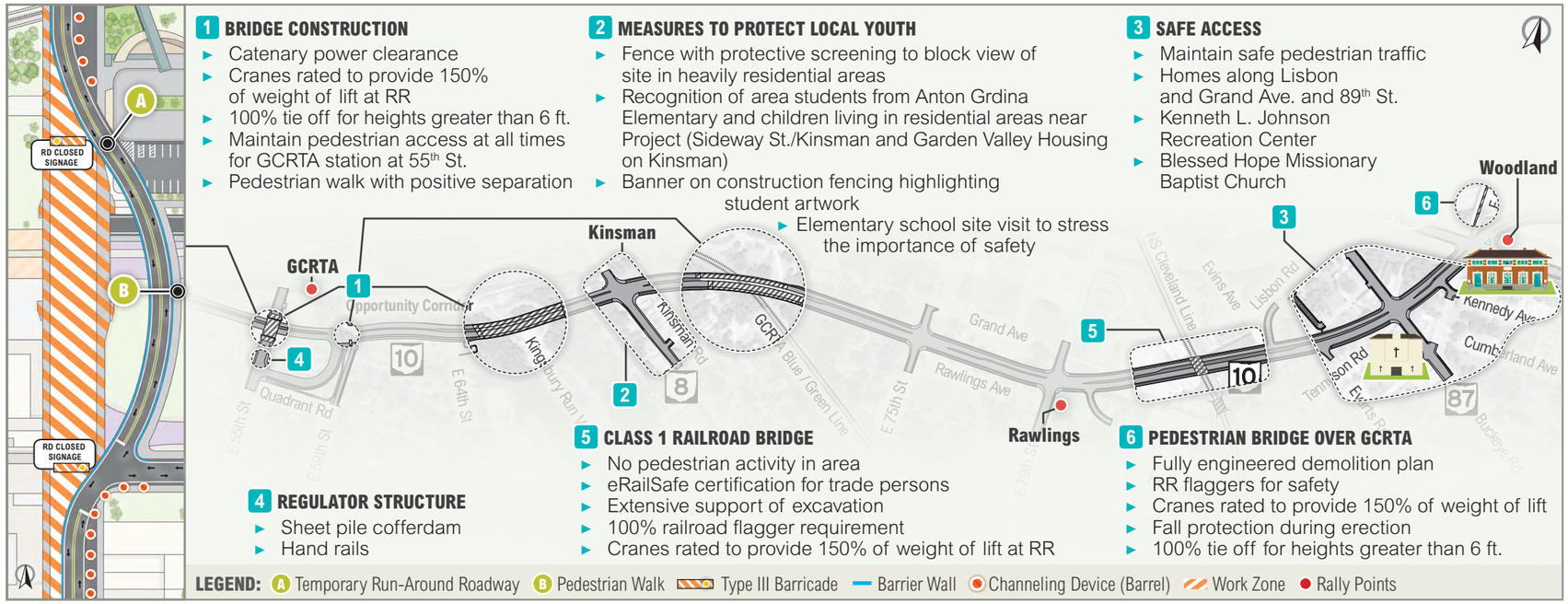
Pedestrian Traffic: Residents in the area need safe access to the East 55th Street Rapid Station, the Kenneth L. Johnson Recreation Center, and schools and businesses in their neighborhoods. The Walsh DBT will address pedestrian access and safety during design and work planning, such as providing a pedestrian walkway with positive separation that maintains GCRTA station access. We will establish ADA-compliant, protected pedestrian routes and maintain safe access. A pedestrian/cyclist-specific detour and phasing plan will be prepared to provide an added measure of safety.

Overall Community Safety: In areas around a large concentration of homes, multi-resident housing, and schools, such as the Anton Grdina Elementary School near Kinsman, the Walsh DBT will use privacy screening to keep residents (especially curious children) outside the construction zone, and maintain all lit areas to ensure community safety. We will use perimeter fencing around buildings marked for demolition and will secure the project site at the end of each work shift.

David Bennett, Public Information Point of Contact (PI POC), and John Krebbs, Work Zone Traffic Supervisor, will assist in our safety coordination efforts. With John's input, David will create and provide to ODOT project-specific maps that show Project phasing, anticipated construction dates for the local roadways within each neighborhood, and information regarding upcoming phase changes. This information can then be communicated to local news and radio stations, as well as to local community leaders and organizers.

Coordination with ODOT and Emergency Services: To ensure a safe and quick response to any emergency, the Walsh DBT will invite ODOT and all appropriate emergency services to participate in developing a site-specific Emergency Response Plan prior to construction. The plan will address procedures for immediately notifying ODOT of any incidents arising out of or in connection with the work. The plan will also provide contact information and communication protocol for each provider, indicate rally points for the Project team, and include incident management maps showing

Figure C.5 Site-Specific Safety Considerations. The Walsh DBT understands the safety needs of the Project corridor. We will implement effective safety measures that go above and beyond the requirements to keep the public and our workforce safe.



each site entrance that will be clearly marked on the jobsite. The plan will outline the protocol for the Walsh DBT to follow in an emergency, including:

- Safely setting up detours and closures
- Using flaggers and message boards to provide a safe zone
- Meeting at rally points
- Meeting first responders at the marked site entrance and escorting them to the emergency location

The Walsh DBT will coordinate incident response requirements with the designated ODOT personnel and meet with local fire and police department representatives ahead of changes to maintenance of traffic patterns to coordinate response plans. With the continually changing conditions of the construction site, we will perform monthly site walks with ODOT and emergency service providers to explain where and what type of work is taking place.

Workforce Safety Planning for OC3

The Walsh DBT's site-specific Safety Plan will include strategies to keep all workers on the site safe. Walsh has strict policies regarding all aspects of working on structures and roadways. **Figure C.6** describes the specific measures we will take to address the potential safety risks associated with OC3's urban roadway and bridge construction. Additional measures include the following:

Job and Task Level Hazard Analysis: Supervisory personnel will perform hazard analyses to identify upcoming construction tasks, potential hazards, and safety measures to be taken to mitigate the hazards. Hazard analyses will be performed on both a job level, through JHAs, and at a task level, through THAs. Supervisors will review JHAs monthly and THAs daily with crews, management, and safety staff.

Foremen Involvement: Foremen drive the safety culture more than anyone else on the jobsite. Walsh programs such as START (Supervisor's Training in Accident Reduction Techniques) and weekly FIRST meetings (Foreman Involvement Results in Safe Tasks) will be used to raise hazard awareness and establish safety performance measurements and accountability for field supervision.

Safety Trained Supervisor in Construction (STSC): Walsh encourages all eligible employees to achieve STSC certification through the Board of Certified Safety Professionals. This certification ensures increased competency and diligence in safety decision-making and improved quality of safety inspections and audits. On OC3, Superintendents Paul Bitters and Clay Clark hold this certification.

Figure C.6 Effective Site-Specific Safety Measures

ATTRIBUTES	SAFETY STRATEGIES
Bridge and retaining wall construction	► Enforce 100% tie-off policy for exposures above 6 feet ► Provide proper fall arrest systems and training ► Install systems during demolition and construction activities to protect infrastructure
Cranes and hoisting	► Use 3D Lift software to prepare an erection plan ► Require a certified assembly and disassembly director for all cranes ► Use certified crane operators ► Train supervisors on crane awareness ► Provide certified rigging training
Railroad coordination	► Require eRailSafe certification for personnel working on Class I railroads ► Establish railroad requirements through early discussion with railroads ► Use railroad-provided flaggers as required ► Provide engineered lift plans including 150% lift capacity as required ► Train for working around active tracks ► Require engineered-stamped demolition and erection plan
Excavation and utility work	► Implement Utility Damage Prevention Program ► Establish utility requirements through early discussion with utility companies ► Keep utility locates current ► Clearly mark live utilities on-site ► Require spotter for all equipment moves ► Expose utilities using hydro-excavation methods and document these locations prior to excavation within one foot of a marked utility ► Protect utilities when in close proximity
Traffic control	► Use attenuator trucks for operations within temporary lane closures (where appropriate) ► Use certified flaggers where required ► Continuously evaluate haul routes, access points, and relevancy of protective signage ► Alert the traveling public of MOT phase changes and alternate routes

Safety Orientation and Training: At orientation, we communicate our safety culture and expectations of working safely on OC3. All staff, subcontractors, inspectors, and ODOT staff will receive orientation and training before working on-site to review the Safety Plan and Emergency Response Plan and receive their "Stop Work Authority" cards. We provide extensive training to our employees and promote an environment that encourages a high level of employee engagement and involvement in safety as part of our successful strategy to an incident-free project.

Designate New Personnel and Trainees: OC3 will require a large workforce with some personnel new to the construction industry. We require all new employees and trainees to wear blue hardhats for their first six months on the job. This alerts experienced staff to new employees who may need safety guidance.

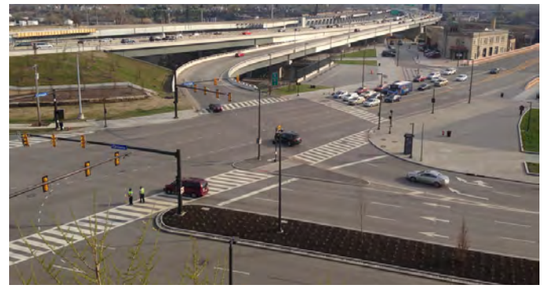
NSLE Subcontractor Safety Mentoring: Subcontractors will be required to adhere to the safety philosophy of the Walsh DBT. We will offer to assist NSLE firms in the development of their own safety culture. This will be accomplished through:

- Inviting NSLE subcontractors to attend safety training held on-site, such as 10- and 30-hour OSHA, CPR/First Aid, crane awareness, and others
- Requiring all subcontractor employees to attend Project safety orientation
- Conducting preconstruction planning workshops to inform new team members on the expectations of the Walsh DBT safety program
- Requiring subcontractors to complete JHAs for their work activities and review them with the Walsh DBT Safety Manager
- Requiring subcontractors to complete THAs for all their operations per shift and crew

Overall Safety Approach

Our overall approach to safety is based on Walsh's successful corporate safety program that has produced strong safety performance year after year. Walsh's EMR is better than the industry average of 1.0, with a measurement of 0.58 for 2016. As a leader in the industry, Walsh sponsors and participates in the industry-wide "Safety Week." Making safety an industry-wide priority improves safety for everyone and saves lives.

Prioritizing Public Safety. On Innerbelt CCG1, Walsh successfully reconstructed the Ontario/Carnegie intersection, an area with significant pedestrian and vehicular traffic, with no accidents and with praise from Progressive Field and the Western Reserve Fire Museum.



In addition to the site-specific measures we have described to protect the public and our workforce, Walsh provides employees the support, tools, resources, and training needed to perform their work safely while being alert to potential hazards. This includes:

High Standards: Walsh's requirements for fall protection and personal protective equipment are stricter than OSHA's. All employees and subcontractors are required to tie off when working above six feet and wear hardhats, gloves, Class III vests, and safety glasses at all times when on-site.

Extensive Training: Training always includes the theme of "No One Gets Hurt" to reinforce Walsh's high expectations. Training provides the tools and skills to meet this goal. Training is customized for each person's responsibilities, and may include confined space, crane safety awareness, American Traffic Services Association (ATTSA) supervisor training, and others. Walsh requires all supervisors to have up-to-date CPR/First Aid training as well as 30-hour OSHA certification.

Behavior-Based Safety Programs: Walsh uses a behavior-based safety program designed to highlight both proper and improper behaviors and to coach participants to make appropriate behavior decisions. Walsh established the successful REAP (Review Employee's Actions and Performance) program that focuses on daily employee interaction, coaching, and recognition to promote safety actions and practices. Staff are trained to recognize concerns and engage others to work toward a safer future.

Unknown Regulated Materials

The Walsh DBT understands our responsibility to meet all regulatory conditions in the handling and disposal of regulated materials. If any unknown regulated material, as defined by the contract documents, is discovered through work on the Project, the Walsh DBT will notify ODOT immediately and follow the Spill Prevention Control and Countermeasures Plan (SPCC) per the requirements of 40 CFR Part 112.

The SPCC is a subset of our site-specific Safety Plan that provides guidance for managing, handling, and disposing of both known and unknown regulated materials that may be encountered within the right-of-way, and for protecting the health and safety of all on-site personnel and the general public. The SPCC will be prepared under the direction of Parsons' Joe Peterlin to ensure we understand the requirements to identify, handle, and dispose of unknown regulated materials. We will review this document with appropriate ODOT personnel during its development to make sure we have a common understanding prior to the start of construction.

To mitigate schedule risk due to unknown regulated materials, we will proceed with demolition and investigatory excavation work as soon as property is available. Early clearing superficial waste will allow for early detection of potentially unknown regulated materials.

Identifying

The investigations completed by ODOT provided in the contract documents describe the types of known regulated materials that will be encountered on site and indicate the potential types of unknown regulated materials. Our SPCC will address the known materials in detail and provide guidance for unknown materials encountered. If any unknown regulated materials are discovered, the Walsh DBT will notify ODOT immediately and follow the steps outlined in the SPCC.

Proper training will be key to identifying unknown regulated materials. All Walsh DBT superintendents will complete hazardous waste operations and emergency response training. The SPCC will be incorporated into Project orientation to provide an appropriate level of awareness for employees working on site, especially

Joe Peterlin, P.E., P.G.

27 Years' Experience

SPCC Plan - Regulated Materials

Joe has experience performing site investigations; aquifer tests; soil, water, and groundwater sampling; remediation system installation/repair; evaluating regulatory options; emergency response; and remediation system design/installation for petroleum, chlorinated solvents, pesticides, lead, acid, and polychlorinated biphenyls contaminated sites.

those employees working in specific areas where unknown regulated materials may be encountered.

Potential soil contamination will be detected through a combination of visual observations, odors, and field meters. All employees performing excavation will be trained to identify soil discoloration, oily sheen, chemical odors, distressed vegetation, or nearby chemical containers. If a potential hazard is discovered, we will notify ODOT immediately and use trained personnel from local firm Environmental Management Specialists, Inc. (EMS) to conduct on-site testing using photoionization detectors and lower explosive limit meters. If field metering warrants, confirmation of soil contamination will be performed through laboratory analysis.

We will identify, delineate, and segregate regulated soils, and coordinate the off-site disposal of soils classified as a non-reusable solid waste or a characteristic hazardous waste. If testing reveals that a soil exceeds either the U.S. Environmental Protection Agency's (EPA) regional screening levels for Ohio EPA regulated chemicals of concern (COCs) or the Bureau of Underground Storage Tank Regulations (BUSTR) re-use action levels listed in OAC 1301:7-9-16 for BUSTR regulated COCs, it will be handled and disposed of as a regulated solid waste. If the soil exceeds the criteria for ignitability (40 CFR 261.21), corrosivity (40 CFE 261.22), reactivity (40 CFR 261.23), or toxicity (40 CFR 261.24), it will be handled and disposed of as a characteristic hazardous waste. In addition, if groundwater exceeds the U.S. EPA maximum contaminant levels listed in 40 CFR 141, it will also be treated and disposed as a regulated waste.

The Walsh DBT will subcontract local firm All Aspects Contracting, Inc. (AAC) for individuals trained in the National Emissions Standard for Hazardous Air Pollutants (NESHAP) provisions during bridge demolitions. AAC will provide an individual trained in the NESHAP provisions on site during the demolition of any structure with asbestos containing materials (ACM).

Removing

If an area with an unknown regulated material is identified, the Walsh DBT will, depending on the hazard, perform the following steps:

- **Notify** ODOT immediately and follow the SPCC
- **Monitor** to evaluate both employee and public exposure to the regulated material, as well as off-site migration of airborne contaminants.
- **Establish an exclusion zone** where all work must be performed in accordance with the accepted SPCC.
- **Decontaminate** to remove potential contaminants from personnel and equipment and to preclude adverse health effects and the transfer of contaminants to clean areas.
- **Dispose** of unknown regulated materials in accordance with the SPCC.

In addition to the SPCC, we will prepare a soils management plan to direct the excavation, stockpiling, and placement of excavated materials. For the NPDES permit under 40 CFR 122, we will provide the necessary soil and erosion control plan. This plan will detail implementation and maintenance of best management practices, such as silt fences and containment booms.

The Walsh DBT will subcontract the removal and disposal of ACM to local certified asbestos removal professional, AAC. We will subcontract EMS to characterize and remove unknown contaminated, hazardous, and any other unknown regulated materials encountered during excavation.

Experience with Unknown Regulated Materials in Cleveland. For Innerbelt CCG1, Mark Hedrick, assisted in managing project areas with the largest amount of unknown regulated materials, including the West 15th Street, West 3rd Street, and Commercial Road areas.

Handling Regulated Materials. The ORB Downtown Crossing project had seven parcels with known contaminated soils. Walsh developed a plan to encapsulate most of the material on site. As worked progressed, additional contaminated areas were found. By the end of the project, **Walsh incorporated more than 60,000 cubic yards of contaminated material** as subgrade, in large fills, and for berms along the highways.

The Walsh DBT will incorporate excavated materials into the Project's construction as much as possible through embankment construction, landscaping areas, and earth mounds. We intend to keep all excavated materials within the Project limits whenever possible.

Handling and Processing

The handling and processing of regulated materials requires detailed tracking and documentation. DB Utilities/Rail/City Coordinator Mark Hedrick will use Innerbelt CCG1 experience handling and processing unknown regulated materials associated with building demolition, utilities, and roadwork. As demonstrated on Innerbelt CCG1, once unknown regulated materials are discovered, the area will be fenced off to prevent any further disturbance until an investigation is completed. ODOT, EMS, AAC, local authorities, and Joe Peterlin will be notified immediately in all instances. AAC will provide demolition, asbestos abatement, ACM management, and NESHAP-trained individuals. EMS will provide specialized remediation, emergency response, tank and utility services, and hazardous removal services.

If unknown regulated materials are encountered, the Walsh DBT will work with ODOT to determine the most economical means of mitigation, remediation, and/or disposal.

Coordination with ODOT/Other Stakeholders

The Walsh DBT understands the requirements and importance of communication in the event an unknown regulated material is encountered. Our SPCC will include a communication protocol to ensure all necessary notifications are made. We will coordinate with ODOT to make sure all parties are in agreement with the required mitigation method and that the necessary stakeholders are included in the process.

D. COMMUNITY INVOLVEMENT AND DIVERSITY & INCLUSION

The Walsh Design-Build Team
Walsh | Parsons | American Structurepoint | G. Stephens

Part D. Community Involvement and Diversity and Inclusion

The name "Opportunity Corridor" embodies the belief that the OC3 Project is much more than a new roadway. The Project aims to stimulate investment, development, and property values along the corridor, along with job growth and readiness for Cleveland residents and businesses, particularly in Wards 4, 5, and 6. The Walsh DBT is committed to bringing these opportunities to New, Small, Local, and EDGE businesses through OC3 and will meet or exceed the Project's expectations. We will accomplish this by engaging in a robust Diversity, Inclusion, and Outreach Program guided by experienced staff and a Project-specific Diversity, Inclusion, and Outreach Plan to help the Project leave a lasting legacy within the community.

The Walsh DBT's diversity, outreach, and inclusion (DIO) team have developed our Diversity, Inclusion, and Outreach Plan (DIOP) to provide an experienced, integrated team and exceed goals:

PROVEN DIVERSITY, INCLUSION, AND OUTREACH TEAM

45+ years of combined Diversity, Inclusion, and Outreach experience

Key Personnel Halle Jones Capers and Brenda Wolf bring over 45 years of combined experience in DIO management.

MEETING AND EXCEEDING THE PROJECT'S NSLE GOALS

2.18%	2.29%	6.36%	22.29%
New	Small	Local	EDGE
⬆ 2%	⬆ 2%	⬆ 6%	⬆ 10%

The Walsh DBT commits to exceeding ODOT's NSLE goals to maximize contracting opportunities for OC3.

EXCEEDING THE PROJECT'S OJT GOALS

22,000	11,000
Type 1 Hours	Type 2 Hours
⬆ 20,000	⬆ 10,000

The Walsh DBT commits to exceeding ODOT's OJT goals and achieving the City of Cleveland resident requirements.

Diversity, Inclusion and Outreach Consultant

Qualifications and Experience

The Walsh DBT's Diversity, Inclusion, and Outreach Consultant (DIOC) is G. Stephens, Inc. (GSI). Founded in 1992, GSI is an EDGE/DBE/SBE-certified, minority-owned firm that provides construction management services throughout Ohio. As a diverse firm that has experienced first-hand the struggles of a small minority-owned business, GSI is uniquely qualified and committed to ensuring parity and inclusion within the contracting community.

GSI has provided DIO services for $2 billion worth of projects in Cleveland and Northeast Ohio for clients including ODOT, the City of Cleveland (Group Plan Commission), and the City of Akron. To achieve OC3 goals, GSI will commit its experience, knowledge, and passion to work for ODOT, the City of Cleveland, and the residents and businesses of Wards 4, 5, and 6.

GSI has a successful record assisting owners and contractors to achieve the desired diversity goals on projects including Innerbelt CCG1 and CCG2, the Redevelopment of Cleveland Public Square, and the City of Akron's $1.4 billion CSO program, Akron Waterways Renewed! (AWR!). For OC3, GSI commits qualified staff to lead the Walsh DBT's DIO effort. With a Cleveland office just 12 minutes away, GSI will have a member of the DIO team co-located most of the time.

Adjacent Wards and Local Community

GSI will utilize their knowledge and experience from working in Cleveland and throughout Northeast Ohio to engage the local community. GSI has worked with a number of organizations and participated in projects that exceeded project diversity goals in and adjacent to Wards 4, 5, and 6 **(Figure D.1).**

GSI recently served as the DIOC for the Redevelopment of Cleveland Public Square Design-Build. This project required owner coordination and used the City of Cleveland Community Benefits Agreement and the Fannie Lewis Law as the foundation for diversity requirements. GSI engaged the project's owner and contractor, along with Cuyahoga Community College, local unions, and other organizations to exceed the project goals and tracked progress through reporting software B2GNow and LCP Tracker.

GSI has previously established relationships and partnerships with Cleveland organizations including:

Construction Employers Association
GSI is a member firm.

Cleveland Engineering Society
GSI is a member firm.

Cuyahoga Community College (Tri-C) Halle Jones Capers is a member of the Construction Engineering Technology Advisory Council (Ward 5).

DBE Consultant of the Year. GSI was recently named **DBE Consultant of the Year for the first-ever Ohio Department of Transportation Excellence in Diversity and Inclusion Awards** at the 2017 Civil Rights Symposium.

ACE Mentor Program
DIOC employees serve as career development mentors for students at Collinwood High School and John Hay High School (Ward 6).

DIOC staff will continue to collaborate with a variety of groups such as the Opportunity Corridor Partnership (OCP), the Opportunity Corridor Inclusion Advisory Committee (OCIAC), the Community Development Corporations (CDCs), the Urban League, Ward councilpersons and neighborhood groups, and K-12 and post-secondary schools including Tri-C and Cleveland State University (Ward 5).

Figure D.1 Local Experience. GSI has served in roles on local projects near Wards 4, 5, and 6 and provides mentorships through the ACE Mentor Program.

LOCAL EXPERIENCE	PARTNERS GSI ENGAGED
(A) Redev. of Clev. Public Square DB* ●	**Colleges:** Tri-C **Local Unions**
(B) Innerbelt CCG1 DB ●	**Not-for-Profit:** Urban League, Hard-Hatted Women, Church Leaders, NAACP, Hispanic Business Assoc. **Business/Economic:** TeamNEO, Larger Minority Contractors **Local Unions** **Colleges:** Tri-C, Case Western, Cleveland State
(C) Collinwood* (D) John Hay	**Local High Schools:** Career mentors to students for the ACE Mentor Program
(E) Akron Waterways Renewed!* ●	**Not-for-Profit:** Akron Urban League and Local Small Business Admin., Akron Summit Community Action **Business/Economic:** Large Akron Prime Contractors, Local Certified Subcontractors **Local Unions** **Colleges:** University of Akron, Stark State

*Located outside of map limits ● Exceeded project diversity goals

Diversity and Outreach Personnel

Full team awareness and buy-in is essential to the success of DIO efforts. The Walsh DBT's experienced DIO leads and Public Information Point of Contact (POC) will report to DB Project Manager, John Tracy. John will ensure proper resources and time are available to commit to the DIO effort from all Walsh DBT member firms. Halle Jones Capers, DB Diversity/Outreach Lead Manager, will lead DIO efforts, complemented by Walsh's Brenda Wolf, Contractor Diversity/Outreach Lead Manager.

DB Diversity/Outreach Lead Manager, Halle Jones Capers

Halle has 26 years of experience in the transportation industry, including as a consultant with both minority and non-minority firms and as a Deputy Director for the ODOT Central Office. Her relationships with local firms and owners will assist her in identifying potential NSLE partners. Her prior work with ODOT Central Office and District 12 staff will help her to maintain clear and open lines of communication for OC3. Halle's resume, provided in **Part F.5,** outlines her qualifications for OC3. Highlights include:

- **Redevelopment of Cleveland Public Square Design-Build and AWR! *(exceeded diversity goals)*:** Served similar DIOC role to assist Ohio firms obtain contracting opportunities
- **Innerbelt CCG1/CCG2:** Prepared compliance reports, provided ODOT Central Office and District 12 with timely status of diversity goals
- **University of Akron (UA) Women in Engineering Program:** Former Program Director (2002-2006)
- **Project GRAD Akron - Girls Rule in Math and Science! (Buchtel High School):** Volunteer/Tutor Coordinator
- **UA IDEAs Program (Increasing Diversity in Engineering Academics):** Chair
- **Tri-C Construction Engineering Technology Program (Ward 5):** Advisory Council Member
- **Various Local Career Fairs/Community Groups:** Speaker and presenter role

Halle will manage OC3's DIO program and the DIOP, as well as serve as the lead contact for local community outreach efforts. With a Cleveland office just 12 minutes away, GSI will have a member of the DIO team co-located most of the time. Halle's relationships and experience with local community groups and resources will prove beneficial in creating and maintaining collaborative partnerships that inform and train local students and residents for opportunities in the design and construction industries. Her approach to managing the execution of the Project's DIO efforts includes:

Interface with contractor DIO and PI staff. Halle has been involved throughout the pursuit phase leading the Walsh DBT's DIO Task Force. She will continue to be supported by GSI staff members Phyllis Stephens and Michael Jefferson. Halle will collaborate with Contractor Diversity/Outreach Lead Manager Brenda Wolf and POC David Bennett to maintain an integrated and coordinated effort.

Partnering with ODOT, City, and Stakeholders. Halle and DIO staff have already formed relationships with several local organizations, unions, and firms to maximize NSLE participation on OC3. She will continue to collaborate with local community groups to facilitate participation, in addition to coordination with ODOT and the City of Cleveland.

Contractor Diversity/Outreach Lead Manager, Brenda Wolf

Brenda has 20 years of construction industry experience. With Walsh, she is responsible for communicating with and seeking out DBE firms and working side-by-side with potential DBE firms to introduce the certification process. Her efforts continue throughout the construction process as she monitors progress toward meeting or exceeding subcontracting goals. Brenda also oversees equal employment opportunity (EEO) efforts to attain and maintain a diverse workforce. Brenda's resume provided in **Part F.5** outlines her qualifications for OC3. Highlights include:

- **Ohio River Bridges East End Crossing P3 *(exceeded DBE goal)*:** Served similar DIO role to maintain compliance; DBE leadership role for 10 community outreach events; partnered with local schools for career nights, classroom presentations, jobsite field trips, and Engineers Week presentations; provided firms with information to acquire additional certifications in home/surrounding states; assisted in mentoring firms such as Messier & Associates, Inc. to achieve a successful mentor-protégé program
- **Milton-Madison Bridge Design-Build *(exceeded DBE goal)*:** DBE Coordinator/EEO Officer
- **Walsh Regional Office:** DBE Coordinator/EEO Officer responsible for regional EEO training and ensuring all jobsites are EEO compliant, follows EEO/AA best practices, implements the U.S. Department of Labor's "16 Steps"

For OC3, Brenda will use her experience to work in conjunction with ODOT, Halle, and additional GSI support staff to provide outreach efforts. Brenda's approach to managing the contractor's DIO efforts includes:

Interface with DIOC and PI staff. Brenda has been involved throughout the pursuit phase as a member of the Walsh DBT's DIO Task Force. She will continue to coordinate efforts with DIOC staff and the POC throughout the Project to manage and monitor Walsh's internal DIO efforts and ensure the Walsh DBT is achieving the Project's NSLE and OJT goals.

Partnering with ODOT, City, and Stakeholders. Brenda and DIO staff have already formed relationships with many local groups and firms to maximize NSLE participation on OC3. She will continue to collaborate with local community groups to facilitate participation in conjunction with ODOT and the City of Cleveland.

Diversity, Inclusion, and Outreach Support

Diversity/Outreach Coordinator Phyllis Stephens will support DIO efforts under Halle's direction (**Figure D.2**). Phyllis has been active during the pursuit in the DIO Task Force. She brings over 20 years of experience managing project compliance and coordination, including monitoring, interviewing, and documenting compliance for EEO, DBE, OJT, and prevailing wage. Phyllis is also experienced in providing design-build support, as she did on Innerbelt CCG1 and CCG2 to fulfill project compliance requirements that bring inclusion and growth opportunities for small, minority, disadvantaged, and women-owned businesses.

When needed, Michael Jefferson will support DIO efforts. Michael has extensive experience in small business assistance, outreach and inclusion, and compliance monitoring with the Akron Urban League.

The Walsh DBT's POC, David Bennett, will work with members of the DIO team to maximize communication efforts with local residents and community groups. David is a life-long resident of Northeast Ohio, and has provided over 25 years of communication expertise to major local highway projects.

Figure D.2 DIO Support. Walsh DBT DIO leads will be supported by experienced staff who have been involved in the DIO Task Force.

PHYLLIS STEPHENS
Diversity/Outreach Coordinator

Commitment to Cleveland: Lifelong resident of NE Ohio, with over 20 years of DIO experience.
Commitment to Community: Board member of the YWCA, Program Director for Adopt-a-School Initiative, and a Life Member of the NAACP.

MICHAEL JEFFERSON
Diversity/Outreach Support (as needed)

Commitment to Cleveland: Lifelong resident of NE Ohio, with over three years of DIO experience.
Commitment to Community: Member of the K.I.N.G. Movement, Cleveland Chapter, and the Akron Urban League Young Professionals. Both organizations promote leadership, mentorship, and volunteerism in the community. Through the TCU Richard Barrentine Ventures Competition, Michael developed a program to teach entrepreneurship to youth through a board game and piloted the program at Robert H. Jamison School in Cleveland and Ravenna High School.

DAVID BENNETT
PI Point of Contact

Commitment to Cleveland: Resident of northeast Ohio, providing over 25 years of communications expertise for major highway construction projects in the area.
Commitment to Community: Through his years working with ODOT, David has in-depth knowledge of media relations protocols and has proven to be responsive to ODOT and local citizens.

Diversity, Inclusion, and Outreach Plan

The Walsh DBT's DIOP provides a clear understanding of the Project's characteristics and requirements, our approach to business and workforce development and community outreach, and our methods to achieve ODOT's goals. Efforts have already begun in the pursuit phase (**Figure D.3**) and will continue post-award through Project completion. The following summary outlines the Walsh DBT's Draft DIOP, with the complete draft plan provided in **Part F.10**.

Business Development

The Walsh DBT commits to providing opportunities to NSLE businesses. We will implement a systematic approach to outreach, training, and mentoring that considers:

2015 - 2016 ODOT Disparity Study: The Walsh DBT reviewed the study and understands a disparity for the following categories of owned businesses: Asian Pacific American, Black American, and Hispanic American. ODOT's NSLE goals and measures for OC3 were developed to assist in opportunity and inclusion of these businesses.

Outreach to NSLE Businesses: The Walsh DBT has identified potential firms through ODOT, the City of Cleveland, and our experience working in the Cleveland market. We attended ODOT events, solicited over 500 NSLE firms, hosted DBT events, and met with over 50 subcontractors, suppliers, and professional service firms during one-on-one meetings. Outreach events were designed to provide information and determine how firms could be most successful on OC3. After award, we will continue to host bi-annual outreach events and meet individually with NSLE firms.

Plan to Mentor NSLE Businesses: The Walsh DBT understands ODOT will benefit from a competitive environment through a large base of NSLE firms capable of performing work on Ohio construction projects. The Walsh DBT commits to mentoring NSLE businesses and implementing the following methods to assist NSLE business development:

- Host bi-annual matchmaking events after award
- Facilitate four Mentor-Protégé Relationships: Eggeman Engineering & Consulting and CAD Concepts, Inc. (prof. services); Urban Recycling and Messier & Associates (construction)

Expand NSLE Business Exposure: During the pursuit, the Walsh DBT met with NSLE firms to gauge their interest and capabilities. We then presented achievable contracts by creating appropriately sized scope packages tailored to the NSLE's ability. After award, we will offer small group instructional workshops to mentor and encourage NSLEs to expand services into new or related disciplines/work-types or to become ODOT prequalified. Walsh DBT personnel, including our Contractor Diversity/Outreach Lead Manager, will provide relevant information on the prequalification process.

Progress Payments: As provided in the Walsh DBT subcontract agreement, subcontractors will submit progress payment applications to the Walsh DBT each month for work performed the previous month. Progress payments will be paid to subcontractors/NSLE firms no later than ten days after payment from ODOT for their work. As a prerequisite for payment, the Walsh DBT will require that certified payroll, waivers, and affidavits be provided as specified by applicable statute. NSLE firms face unique financial challenges affecting their ability to respond to projects. We realize these challenges and commit to assisting NSLEs to complete the required paperwork to ensure timely payment.

Developmental Workshops: Training sessions and workshops will provide NSLE firms with the skills required to participate in upcoming opportunities. The Walsh DBT will:

- Build upon relationships with community groups/organizations to refer firms to training opportunities.
- Partner with local entities to provide training to NSLE firms where a specific need has been identified
- Include workshop topics such as bonding, estimating/quoting, safety, quality, scheduling, understanding cost of work, project close-out, and contract requirements.
- Assist with the certification process and direct firms to additional resources and agencies who can provide assistance.
- Conduct and participate in informational sessions to provide details regarding certifications, training, upcoming opportunities, and ensuring local workforce for their businesses. An NSLE Task Force (a subsidiary of the DIO Task Force) will be established, with NSLE participation, to determine the frequency and topics discussed.

Ongoing Efforts with Businesses: We will continue these business development activities through the Project's duration and leave the local business community healthier and more prepared for continued success. Through quarterly meetings, workshops, and training events, firms will gain additional knowledge and skills required to advance their businesses.

As with any construction project, additional work opportunities arise throughout the Project's duration. When this occurs, the Walsh DBT will work with NSLE firms to ensure they are given the first chance to bid on scope packages.

Workforce Development

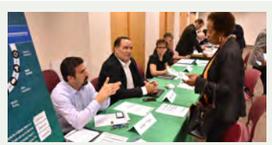
The Walsh DBT will continue the City of Cleveland's efforts to increase opportunities for residents by employing a diverse, skilled workforce that is capable of meeting the demands of ODOT projects.

Engaging Community Agencies and NSLE Businesses: The Walsh DBT will work with local workforce development agencies to identify eligible residents for workforce development programs and employment opportunities. We will continue to collaborate with community leaders and groups, training agencies, union leaders, trade organizations, and educational institutions to engage and inform potential

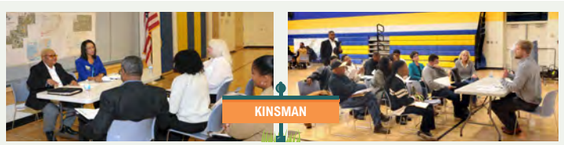
Figure D.3 Walsh DBT Pursuit Outreach. The Walsh DBT performed extensive outreach efforts for OC3.

DATE(S) AND EVENT	LOCATION(S)
10/18/2016 ODOT Matchmaking Event	Bureau of Workers' Compensation
11/15/2016, 2/2/2017 Walsh DBT Project Overview/Breakout Session Outreach Events	Anton Grdina Elementary School
11/3/2016,11/16/2016, 2/2/2017 Neighborhood Connections' Neighbor Up Events	University Circle United Methodist Church, Cleveland Public Library Rice Branch
1/18/2017, 2/15/2017, 7/19/2017, 10/13/2017 OCIAC Meetings	Woodhill Homes Community Center
1/24/2017, 1/31/2017, 2/7/2017 Walsh DBT Community Outreach Events	Karamu House and Parsons/Arcadis offices
1/26/2017, 2/2/2017, 2/9/2017 Walsh DBT Workforce Outreach Events	Karamu House
3/10/2017 Walsh DBT OC3 Workforce Presentation	Cuyahoga Community College
Various Dates Walsh DBT One-on-One Meetings with over 50 NSLE firms	Karamu House

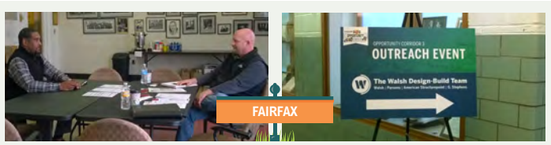
Walsh DBT Pursuit Outreach. Through various outreach events, Walsh DBT members met with potential NSLE firms to provide Project details and present contracting opportunities.



ODOT October 18, 2016, Matchmaking Event. The Walsh DBT's DIO staff, design staff, and construction staff attended the matchmaking event to establish new relationships with local NSLE firms as well as build upon pre-existing relationships from past project experience.



Walsh DBT November 15, 2016, and February 2, 2017, Outreach Events. The Walsh DBT hosted two outreach events at the Anton Grdina Elementary School in Ward 5. The events included a Project overview and six breakout sessions addressing specific opportunities to NSLEs.



Walsh DBT December 15, 2016, NSLE One-on-One Meetings. The Walsh DBT's Lead Estimator Steve Hanchar, a member of the DIO Task Force, met with potential NSLE firms at the historic Karamu House in Fairfax (Ward 6) to discuss potential opportunities for OC3.

local workforce candidates of Project and training opportunities. These organizations include:

- Local workforce development agencies
- Councilpersons Kenneth Johnson (Ward 4), Phyllis Cleveland (Ward 5), and Blaine Griffin (Ward 6)
- CDCs: Burten, Bell, Carr (Ward 5); Fairfax Renaissance Development Corp. (Ward 6); University Circle, Inc. (Ward 6); and Buckeye Shaker Square Development Corp. (Wards 4/6)
- Urban League of Greater Cleveland
- Local churches
- Local unions
- CMSD including MC^2 STEM and East Technical high schools, and the Jane Addams Business Career Center

Non-Traditional/Adult Workforce. Non-traditional/adult individuals may fall into Type 1 or Type 2 OJT. We will reach out to local educational programs including Tri-C's ABLE Program and Adult Diploma Program. We will also reach out to prison reentry programs, including the North Star Neighborhood Reentry Resource Center (near Ward 6), the Cuyahoga County Office for Reentry (near Ward 5), and the Cleveland Eastside Ex-Offender Coalition (near Ward 5).

Type 1 OJT "Blue-Collar" Workforce. The Walsh DBT will implement a Type 1 OJT program using a four-phase process (detailed in F.10), which includes tracking training and union apprenticeship/pre-apprenticeship opportunities offered by the following organizations: the Construction Employers Association (CEA), Cleveland Public Schools, American Contractors for Economic Equality, local unions (**Figure D.4**), and Hard Hatted Women.

Figure D.4 Local Unions. The Walsh DBT reached out to local unions to discuss pre-apprenticeship programs and potential employment opportunities.

UNION LOCAL	DATE OF MEETINGS
Laborers Local 860	12/2/2016, 10/26/2017
Carpenters Local 373	12/7/2016, 11/2/2017
Operating Eng. Local 18	12/9/2016, 10/26/2017
Cement Masons Local 404	3/9/2017, 10/26/2017
Iron Workers Local 17	3/10/2017, 10/25/2017
Cleveland Building & Trades	11/2/2017

Type 2 OJT Semi-Professional or Professional Services Workforce. The Walsh DBT will engage local high school and college graduates through career days, college career fairs, and high school and post-secondary training programs. Local high school and post-secondary students from Wards 4, 5 and 6 will be the focus for internship opportunities in professional services, or pre-apprenticeship programs for construction trades.

City of Cleveland Residents and Low Income Persons: The Walsh DBT will continue to reach out to local unions and community groups to hire the maximum number of residents from Wards 4, 5 and 6 while providing additional training if needed. We will monitor the reported workforce numbers throughout the contract duration and report if corrective action is required to meet the workforce goals of 20% of construction hours performed by City of Cleveland residents and 4% low income persons.

Residency/Low Income Persons Verification. In accordance with the workforce requirements outlined in Proposal Note 098, the Walsh DBT and subcontractors will verify residency and low-income status using documentation such as certified payrolls submitted through ODOT's Civil Rights Labor Management System (CRL) and certified letters as outlined in PN 098. We will obtain verification from one of the following entities: the Cuyahoga Metropolitan Housing Authority, Cleveland Housing Network, Cuyahoga County Jobs and Family Services, or the City of Cleveland, Mayor's Office of Equal Opportunity.

The DIOC shall verify resident and income eligibility from CRL submitted documents, include the status of each subcontractor meeting the resident and low-income worker hour requirements in the monthly report, and work with the Contractor Diversity/Outreach Lead Manager and subcontractors to assist in any DIOP adjustments to meet Project Goals.

Continuing Workforce Development: The DIOC will track local Cleveland employees working on OC3 to verify they are gaining the skills needed to perform the work. We will offer any further assistance necessary, and continually monitor our workforce development performance.

Community Outreach

We will build upon pursuit efforts to engage various levels of the local community, enhance job readiness, promote economic opportunity, and build the community's sense of investment and ownership in OC3.

Local Youth and Students: The Walsh DBT will work with local K-12, vocational, and post-secondary schools to engage students, foster an interest in STEM fields, and promote opportunities. We commit to participating in K-12 programs, including the ACE Mentor Program, NSBE Jr. (National Society of Black Engineers), and the Cleveland Engineering Society. For high school graduates and post-secondary students, we will support their continued development through:

- Seeking recent graduates of Wards 4, 5, and 6, for co-op and internship opportunities
- Building upon existing partnerships with Tri-C and UA to provide candidates with relevant experience
- Continuing Advisory Council participation by the Walsh DBT's DB Diversity/Outreach Lead Manager for Tri-C's IDEAs Program
- Providing additional participation to local chapters of NSBE to further support STEM business students at Tri-C, Cleveland State University, Case Western University, and UA

Community Engagement Approach: The Walsh DBT has already begun identifying and meeting with the community. Our goal is to establish a strong level of comfort with OC3 residents and businesses and maintain two-way communications. Through community meetings and other outreach, we will engage:

- **CDCs:** Local CDCs will serve as springboards to initiate communication with citizen groups, organizations, churches, and schools, as well as to promote collaboration to advance business, workforce, and youth development programs. Walsh DBT members have attended three of Neighborhood Connections' Neighbor Up meetings to understand important community issues. We commit continued participation in this local initiative.
- **OCP and OCIAC:** We will continue collaboration with the OCP Steering Committee by participating in monthly Steering Committee meetings and other activities. Members of the Walsh DBT, including the DB Diversity/Outreach Lead Manager have attended OCIAC meetings this year. We will continue to engage with the OCIAC by attending the monthly meetings and providing reports and updates of inclusion and outreach activities and progress to date on project goals.
- **Local Organizations and Businesses:** Outreach to local groups will include reaching out to hospitals at University Circle (Ward 6), St. Vincent Charity Medical Center (Ward 5), and MetroHealth (Near Ward 5); seeking assistance from the Urban League and the Cleveland Central Promise Neighborhood (Ward 5); and leading informational presentations. We will also reach out to area businesses, such as the Orlando Baking Company (Ward 5), to inform them of construction activities and local investments resulting from OC3.

Community Outreach. The Walsh DBT **led three community-focused outreach events** during the pursuit to engage community groups of Wards 4, 5, and 6, such as the Greater Cleveland Habitat for Humanity.

Community Service Project: The Walsh DBT will work with the City of Cleveland to identify one location along OC3 for a new community park and playground. Partnering with a local community group while working with city and community leaders, churches, and organizations, the Walsh DBT will seek grant funding from Kaboom!, plan the layout and amenities, and plan and execute a Playground Build Day with community member involvement from start to finish.

Language Barriers: The Walsh DBT identified Spanish as the most prominent language leading to language barriers. We will seek to partner with the Northeast Ohio Hispanic Chamber of Commerce (NEOHCC). The Walsh DBT will meet twice per year with the NEOHCC to address language issues. Additionally, all hiring packets, handbooks, safety training manuals, and informational packets will be printed in Spanish and English. For outreach event RSVPs, we will request attendees specify any language accommodations, not just those specific to Spanish. We will then coordinate with a translation service, or work with bilingual Tri-C students, to provide an in-person translator or document translations.

E. PREQUALIFICATION

The Walsh Design-Build Team
Walsh | Parsons | American Structurepoint | G. Stephens

Part E. Prequalification

Table E.1 Construction Prequalifications

WORK TYPE CODE	WORK TYPE DESCRIPTION	CONTRACTOR/SUBCONTRACTOR TO PERFORM THE WORK
1	Clearing and Grubbing	Walsh Construction Company II, LLC
2	Building Removal	Walsh Construction Company II, LLC
4	Roadway Excavation and Embankment Construction	Walsh Construction Company II, LLC
6	Incidental Grading	Walsh Construction Company II, LLC
7	Soil Stabilization	Walsh Construction Company II, LLC
8	Temporary Soil Erosion & Sediment Control	Walsh Construction Company II, LLC
9	Aggregate Bases	Walsh Construction Company II, LLC
10	Flexible Paving	Walsh Construction Company II, LLC
11	Apply Bituminous Treatments	Barbicas Construction Construction
12	Rigid Paving	Walsh Construction Company II, LLC
13	Pavement Planing, Milling, Scarification	BOCA Construction Inc.
14	Concrete Texturing	Prequalified Subcontractor
15	Sawing	Walsh Construction Company II, LLC
16	Flexible Replacement	Barbicas Construction Construction
17	Rigid Pavement Replacement	Walsh Construction Company II, LLC
18	Pavement Rubblizing, Breaking, Pulverizing	Walsh Construction Company II, LLC
19	Structure Removal	Walsh Construction Company II, LLC
20	Level 1 Bridge	Walsh Construction Company II, LLC
21	Level 2 Bridge	Walsh Construction Company II, LLC
22	Level 3 Bridge	Walsh Construction Company II, LLC
23	Reinforcing Steel	Walsh Construction Company II, LLC
24	Structural Steel Erection	Walsh Construction Company II, LLC
25	Stud Welding	Prequalified Subcontractor
26	Structural Steel Painting	Prequalified Subcontractor
27	Expansion & Contraction Joints, Joint Sealers, Bearing Devices	Walsh Construction Company II, LLC
28	Caissons/Drilled Shafts	Walsh Construction Company II, LLC
29	Structure Repairs	Walsh Construction Company II, LLC
31	Structural Steel Repairs	Walsh Construction Company II, LLC
33	Tieback Installation	Walsh Construction Company II, LLC
34	Earth Retaining Structures	Walsh Construction Company II, LLC
35	Drainage (culverts, misc.)	Walsh Construction Company II, LLC
36	Guardrail/Attenuators	M.P. Dory Co.
37	Fence	M.P. Dory Co.
38	Misc. Concrete	Walsh Construction Company II, LLC
39	Maintenance of Traffic	Walsh Construction Company II, LLC
40	Waterproofing	Walsh Construction Company II, LLC
41	Raised Pavement Markers	Prequalified Subcontractor
42	Signing	Prequalified Subcontractor
43	Highway Lighting	Miller Cable Company
44	Traffic Signals - Standard	Miller Cable Company

Table E.1 (Continued) Construction Prequalifications

WORK TYPE CODE	WORK TYPE DESCRIPTION	CONTRACTOR/SUBCONTRACTOR TO PERFORM THE WORK
45	Pavement Markings	American Roadway Logistics, Inc.
46	Landscaping	Follow the River Environmental The C J Zack Company, Inc.
47	Mowing	Prequalified Subcontractor
48	Trucking	Prequalified Subcontractor
49	Herbicidal Spraying	Prequalified Subcontractor
50	Railroad Track Construction	Prequalified Subcontractor
51	Micro Tunneling	Prequalified Subcontractor
52	Tunneling	Walsh Construction Company II, LLC
53	Piling	Walsh Construction Company II, LLC
54	Post-Tensioning Bridge Members	Walsh Construction Company II, LLC
55	Fiber Optic Cable Installation, Splicing, Termination and Testing - Traffic Signal System	Prequalified Subcontractor
56	Fiber Optic Cable Installation, Splicing, Termination and Testing - Intelligent Transportation	Prequalified Subcontractor
57	Sealing of Concrete Surfaces with Epoxy or Non-Epoxy Sealers	Prequalified Subcontractor

Table E.2 Designer Prequalifications

PREQUALIFICATION CATEGORY	CONSULTANT/SUBCONSULTANT TO PERFORM THE WORK
Roadway	
Bicycle Facilities and Enhancement Design	Parsons Transportation Group, Inc.
Complex Roadway Design	Parsons Transportation Group, Inc.
Subsurface Utility Engineering	Resource International
Bridge Design	
Level 2 Bridge Design	Parsons Transportation Group, Inc., Arcadis
Bridge Design Sub-Factors: Complex Geometry	Parsons Transportation Group, Inc.
Soils/Geotechnical Services	
Geotechnical Engineering Services	SME
Geotechnical Testing Laboratory	SME
Geotechnical Field Exploration Services	SME
Geotechnical Drilling Inspection Services	SME
Traffic Signal Design	
Traffic Signal System Design	Parsons Transportation Group, Inc., Arcadis
Highway Lighting Design	
Complex Lighting Design	Eggeman Engineering Consulting
Environmental Documentation	
Environmental Site Assessment Phase II	Parsons Transportation Group, Inc.
Additional services and roles not covered under a prequal are:	
Surveying	Garcia Surveyors
Copying and reproduction, scanning	SE Blueprint