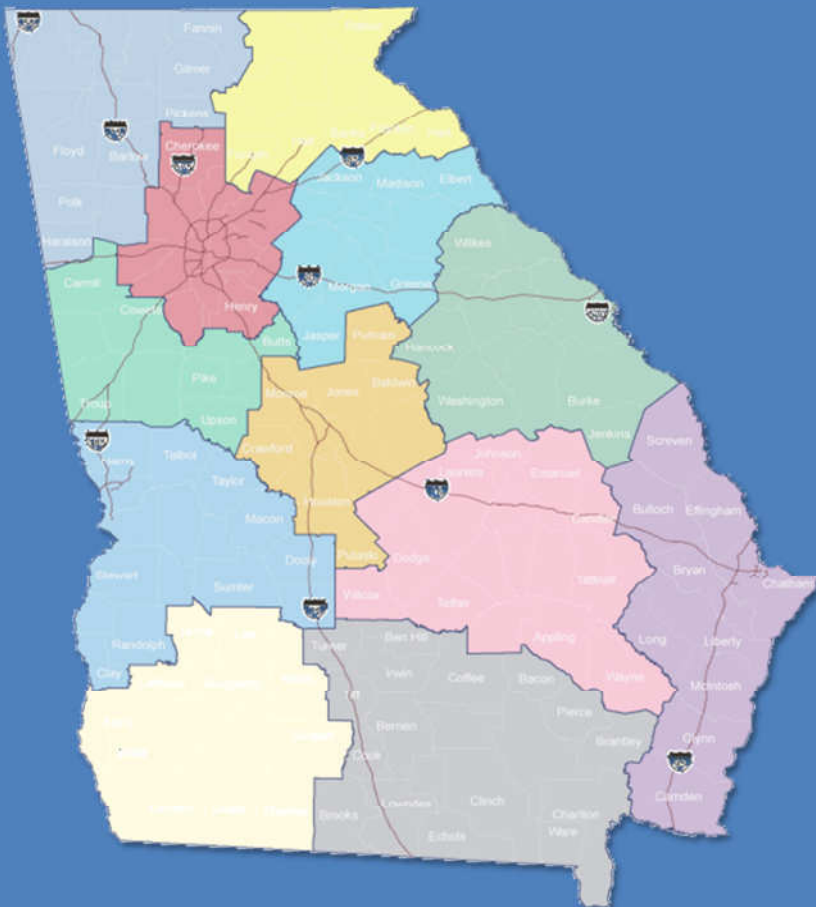


Transportation Investment Act of 2010 Manual – Processes and Procedures (TIA Manual)



August 2012

VERSION 1

REVISIONS

The Transportation Investment Act of 2010 Manual – Processes and Procedures (TIA Manual) will be periodically updated to appropriately reflect Georgia Department of Transportation's (GDOT's) processes and procedures. An entire chapter or any portion of one or more chapters of the TIA Manual may be re-written and replaced at any time. The date of revision and latest revision for each chapter will be listed in the revision table below.

Date of Revision	Revision

PURPOSE

The TIA Manual is intended to provide high level guidance necessary to efficiently and effectively deliver the projects on the Approved Investment List(s) from the Transportation Investment Act of 2010 (Program). All parties involved with any facet of this project delivery process must stay focused on delivering the intended projects to the Special Districts and the citizens of the State of Georgia on schedule and within budget. For any specific areas that are not included in the TIA Manual, please seek guidance from the GDOT.

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CHAPTER 1: DEFINITIONS

Bridge Foundation Investigation (BFI) – Engineering reports regarding the existing subsurface conditions on which a bridge structure will be built.

Chief Engineer – The Engineering Executive appointed by the Commissioner, or other authority as provided by law, and acting for GDOT within the authority and scope of duties assigned.

Design Build – Combining of design engineering and other preconstruction services with construction services into a single contract.

Design-to-Budget – A process that designers may introduce to effect certain engineering philosophies, standard design practices, scope elements and other considerations necessary to deliver a Transportation Investment Act of 2010 (“TIA”) funded project within budget. Each TIA funded project has a budget as defined in the Approved Investment List(s). The link to the final Approved Investment List(s) is located in the References Chapter. The Engineer of Record may introduce budget conscious, value engineering and/or practical design ideas that will follow an order of precedence listed in the TIA Manual under the Design-to-Budget heading.

Electronic Data Guidelines (EDG) – Guidelines that set forth criteria, procedures and standards for computer and/or other electronic data used in the preparation of plans and other documents.

Engineer of Record (EOR) – A licensed professional engineer in Georgia who develops and/or is responsible for the overall design, design criteria and components of a project. This person may delegate responsibility for the design of a system or component part to a delegated engineer but is ultimately responsible for the delegated engineer’s design and the project’s total design.

Environmental Documentation – The documentation necessary to ensure a project’s compliance with the National Environmental Policy Act of 1969 (NEPA), or the Georgia Environmental Policy Act of 1991 (GEPA) and/or all federal and State permit requirements as applicable

Local Government – Any municipal corporation, county, or consolidated government created by the General Assembly or pursuant to the Constitution and laws of the State of Georgia.

Local Maintenance and Improvement Grant (LMIG) – Program that allows Local Governments to decide which types of projects would be most beneficial to their local jurisdiction.

Load Resistance Factor Design (LRFD) – A design methodology for structures that utilize load factors developed using probabilistic methods for the design of structural elements.

Off-System – Local road systems that do not meet the definition of an On-System route.

On-System – An existing State route, an existing Interstate route or over or under an existing State or Interstate route.

Political Subdivision – The State or any local subdivision of the State or public instrumentality or public corporate body created by or under authority of State law, including, but not limited to, municipalities, counties, school districts, special taxing districts.

Plan Development Process (PDP) – GDOT manual that outlines the current process of project development from the project identification through construction award or Final Acceptance for all federal aid projects under GDOT oversight.

Plan Presentation Guide (PPG) – A guide that sets forth the criteria for the electronic appearance and format of plans. These criteria establish, define, and clarify procedures and standards for plans to be used by GDOT. These criteria are not intended to establish design processes; rather, they are guidelines to assure that all drawings have uniform appearance and include all pertinent information, avoid unnecessary information, and reflect high quality workmanship.

Regional Program Manager (RPM) – GDOT's consultant representative that will manage, provide oversight and approve all project phases and activities to ensure that all elements of the work meet the required laws, regulations, quality, design standards, schedule and budget. The Regional Program Manager will have a delegation of authority to act on GDOT's behalf, and will provide the resources and expertise necessary to understand, and be responsible for, a broad spectrum of services related to the TIA Program.

Soil Survey – A report developed to provide project designers with safe, effective and cost efficient recommendations for the design of roadway foundations, embankments and the treatments for Geotechnical and other problems on the project. Soil Survey reports may also be used by contractors to assist in preparing bids, and by project engineers during construction to identify and help solve problems.

Special Districts – The twelve special districts based on existing Regional Commission boundaries as created by O.C.G.A. § 48-8-241. A link to a map indicating the District boundaries can be found in the References Chapter. The three Special Districts which voted to levy the special district transportation sales and use tax are: Central Savannah River, Heart of Georgia, and River Valley.

State TIA Administrator – GDOT representative from the TIA Office with oversight responsibility for the TIA program and the TIA Regional Coordinator(s).

Storm Water Management Program (SWMP) - The program to provide requirements to Local Governments and staff on addressing stormwater runoff to both improve stormwater quality and reduce quantity impacts, and protect downstream areas and receiving waters. It does not cover construction site sediment and erosion control practices. Guidance on these practices can be found in the Manual for Erosion and Sediment Control in Georgia.

Subject Matter Expert (SME) – An individual who exhibits the highest level of expertise in performing a specialized job, task, or skill within the organization performing the work; anyone with in-depth knowledge of the subject.

TIA Regional Coordinator (TRC) – GDOT representative from the TIA Office with oversight responsibility for the Regional Program Manager and activities within the Special District(s).

The Source – The Source is GDOT's online reference for contractors. Within The Source, contractors will find information pertaining to bridges, culverts and retaining walls, construction manual, erosion control, earthwork, pavements, special provisions, specifications, and sampling, testing, and inspection.

Transportation Investment Act of 2010 (TIA) - The Act that created 12 Special Districts of the State and authorizes elections to be held in each Special District which would allow each Special District independently of any other Special District to approve and authorize the imposition of a special district transportation sales and use tax to fund transportation projects within the Special District. O.C.G.A. § 48-8-240 *et seq.*

Wall Foundation Investigation (WFI) – Engineering reports regarding the existing conditions on which a wall structure will be built.

CHAPTER 2: ACRONYMS

AASHTO – American Association of State Highway and Transportation Officials

ADA – Americans with Disabilities Act

BFI – Bridge Foundation Investigation

BMP – Best Management Practices

CEI – Construction Engineering and Inspection

CES – Cost Estimation System (Transport Cost Estimation System (CES®))

DE – Design Exception

DP & S – GDOT's Office of Design Policy & Support

DPM – GDOT Design Policy Manual

DV – Design Variance

EDG – Electronic Data Guidelines

EOR – Engineer of Record

EPD – Environmental Protection Division

EPM – Environmental Procedures Manual

ESPCP – Erosion, Sediment, and Pollution Control Plans

FPR – Field Plan Review

GDNR – Georgia Department of Natural Resources

GDOT – Georgia Department of Transportation

GEPA – Georgia Environmental Policy Act

GRTA – Georgia Regional Transportation Authority

GSFIC – Georgia State Financing and Investment Commission

GUCC – Georgia Utility Coordination Council

GUPS – Georgia Utility Permitting System

IGA – Intergovernmental Agreement

ITS – Intelligent Transportation System

L&D – Location & Design

LAP – Local Administered Project

LFR – Load Factor Rating

LMIG – Local Maintenance and Improvement Grant

LRFD – Load and Resistance Factor Design

LRFR – Load and Resistance Factor Rating

MOU – Memorandum of Understanding

MPO – Metropolitan Planning Organization

MS4 – Municipal Separate Storm Sewer System

MUTCD – Manual on Uniform Traffic Control Devices

NEPA – National Environmental Policy Act

NHPA – National Historic Preservation Act

NOI – Notice of Intent

NPDES - National Pollutant Discharge Elimination System

PID – Public Interest Determination

PDP – GDOT Plan Development Process

PPG – Plan Presentation Guide

QA – Quality Assurance

QC – Quality Control

QPL – Qualified Products List

RFI – Request for Information

ROW – Right-of-Way

RPM – Regional Program Manager

SAAG – Special Assistant Attorney General

SME – Subject Matter Expert

SWMP – Storm Water Management Program

TIA – Transportation Investment Act of 2010

TRC – TIA Regional Coordinator also Project Coordinator

UAM – GDOT Utility Accommodations Manual

UCM – Utility Coordination Manager

UPC – Utility Protection Center

USACE – U.S. Army Corps of Engineers

VE – Value Engineering

WFI – Wall Foundation Investigation

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CHAPTER 3: OVERVIEW OF TIA PROGRAM DELIVERY

O.C.G.A. §48-8-249 delegates to GDOT the management of the budget, schedule, execution, and delivery of the projects contained in the Approved Investment List(s) “for all transportation projects except bus and rail mass transit systems and passenger rail in any special district the boundaries of which are not wholly contained within a single MPO.”

The TIA Program is a “project driven program”. The projects in the Approved Investment List(s) constitute the program for each Special District. The fundamental elements of the management of the budget, schedule, execution, and delivery of the projects contained in the Approved Investment List(s) are:

- All the projects on the Approved Investment List(s) must be delivered for each Special District.
- The project budgets are defined in the Approved Investment List(s) and are the maximum amount of special district transportation sales and use tax proceeds (TIA funds) available for the project. Therefore, projects will be designed and constructed to budget. (GDOT is not responsible for supplementing or providing any additional funds unless otherwise shown in the Approved Investment List(s).)
- Projects will be delivered on a pay as you go basis or as approved by GDOT should other funding be provided from a sponsor. GDOT is responsible for determining when a project or project phase is initiated if TIA funds are required for the phase.
- The obligation for payment/reimbursement is limited to the amount of TIA funds available. Eligible Project Costs, as defined in O.C.G.A. § 48-8-242(2) and in an agreement to be executed between GSFIC and GDOT, will be paid/reimbursed to the sponsor and/or consultant/contractor upon the completion of the following:
 - Project element or project is complete and invoicing is submitted to RPM;
 - GDOT’s certification of invoices to GSFIC;
 - GSFIC’s approval of GDOT’s certification; and
 - GSFIC’s payment/reimbursement to GDOT.

The processes and procedures outlined in this Manual shall apply to projects on the Approved Investment List(s) for each Special District that are not federally funded. This TIA Manual does not apply to the projects developed by Local Governments as part of the discretionary funds provided under O.C.G.A. § 48-8-249(e).

Projects that have federal funds in the construction phase of the project will follow the PDP. Projects that have phases that will result in a federal action shall follow all federal requirements for that phase. Future phases of the project that will not require a federal action will follow requirements in the TIA Manual.

CHAPTER 4: PROJECT INITIATION

GDOT is responsible for delivering the projects in all Special Districts which voted to levy the special district transportation sales and use tax. O.C.G.A. § 48-8-249(c) requires GDOT to determine if a project should be designed and constructed by GDOT, a Local Government or by another public or private entity. Once that determination has been made, the project must be implemented “in accordance with applicable state and federal requirements”. It is critical that projects be delivered in the most cost effective manner possible as to maximize the use of the available TIA funds identified for each project on the Approved Investment List(s)

GDOT will coordinate with the Local Governments to determine their interest in project delivery. Each Local Government will complete a Local Delivery Application if they desire to deliver a project as required by O.C.G.A. § 48-8-249(c). At GDOT’s discretion, delivery by Local Governments may be by phase or by the entire project. Upon review and approval by GDOT, an Intergovernmental Agreement (IGA) for each project will be initiated on a project basis.

ROLES AND RESPONSIBILITIES

The Regional Program Manager will ensure that the individual project budget(s) is not exceeded, will keep GDOT well-informed of the progress of the projects through all phases, will ensure that the necessary approvals and certifications are granted or obtained, will ensure that all close-out documents are completed in a timely manner and will ensure that all warranty items are properly addressed. The RPM will assist with developing a strategy for the best approach for the successful completion of the Program. The RPM will provide collaboration, guidance, and acceptance of schedules and reliable cost estimates to GDOT.

It will be the RPM's responsibility to ensure that proper coordination is occurring between the EOR, Local Government, GDOT and all other project team members involved in the project. The RPM will determine the frequency of project status meetings to ensure effective management of the project.

The chart below provides an overview of RPM duties. The chart is not intended to be all inclusive.

Financial Controls	Program Controls	Technical	Administrative	Communication
<ul style="list-style-type: none">• Forecasting• Risk Management• Budget Management• Scheduling• Audits	<ul style="list-style-type: none">• Schedule Management• Data Integration• Engineering Services• Document Control• Reporting• Project Audits	<ul style="list-style-type: none">• Concept Development• Concept Validation (Local)• Utility Coordination• CEI/Testing Management• ROW Approvals• QC/QA• Environmental Approval and Permitting	<ul style="list-style-type: none">• Accounting• Procurement Support• IGA Coordination• Invoicing	<ul style="list-style-type: none">• Public Involvement• Stakeholder Management• Dashboard Reporting• Web/Social Media• Media Support

CHAPTER 5: CONCEPT / SCOPE DEVELOPMENT

A Concept Report must be completed and approved for all TIA funded projects regardless of sponsor excluding resurfacing or other minor projects at RPM's discretion. The Concept Report is a record of the defined scope of work to be performed for the recommended project. The scope of the project shall satisfy the Special District's Approved Investment List(s) project's descriptions and benefits.

Federal Aid

Projects with federal funds will have Concept Reports that will follow the traditional process set forth by GDOT's latest Plan Development Process (PDP) manual.

Non Federal Aid

The Concept Report will follow this TIA Manual and will be circulated to GDOT, Local Government and the Regional Commission. The Regional Commission, or its designee, will be presented with a copy of the report for review. GDOT's Chief Engineer must approve the Concept Report for the project to move forward.

The projects will be designed and constructed to budget. Appropriate contingencies must be included in the project cost estimates. Upon concept approval, the concept shall not change unless there are revenue shortfalls. Project schedules including an expenditure schedule must be included with the Concept Report. The expenditure schedule will detail the expected expenses on a monthly basis necessary to deliver each phase of the project. The project schedules shall utilize Primavera® scheduling software and include major milestones activities and sufficient details to properly describe all phases of the Work.

Design traffic volumes may not be necessary for TIA funded only projects and for which the project description included a specific number of lanes for the widening. Design year volume is important and may be necessary on various project types and may be needed for other design elements.

CONCEPT TEAM MEETINGS

For TIA funded projects, an Initial Concept Team Meeting and a Concept Team Meeting may be waived by RPM's recommendation and acceptance by GDOT.

REVISED CONCEPT REPORT

For TIA funded projects, any changes to the original approved Concept Report should be summarized in a technical memorandum attachment. This technical memorandum should be included with the original approved Concept Report, as a complete package, and will serve as a Revised Concept Report which is submitted for RPM concurrence and GDOT's approval.

CHAPTER 6: ENVIRONMENTAL PROCESS

The TIA projects are required to follow an environmental process commensurate with the sources of funding, potential environmental impacts, and jurisdiction of federal and State agencies. The environmental process is a multi-disciplinary effort that often requires consultation with a number of outside agencies and involvement with the public.

Projects that use TIA, Local, or State funds are required to comply with the Georgia Environmental Policy Act (GEPA) process. However, environmental impacts may require the involvement of federal agencies such as the U.S. Army Corps of Engineers (USACE) if the project impacts natural resources that may warrant a Section 404 permit following the regulations of the Clean Water Act. If a 100% TIA funded project shares common termini with a Federal Aid project, then consultation with GDOT is required to determine if National Environmental Policy Act (NEPA) must be followed to protect the environmental decision of the adjacent project. GDOT's *Environmental Procedures Manual* (EPM) describes the policies and procedures of the State and federal environmental process in detail.

Projects that fall under federal jurisdiction are required to follow the policies and procedures of the NEPA. The GDOT EPM shall be followed for projects that receive State and federal funds.

ENVIRONMENTAL SCOPING AND PERMITTING ROLES

An initial screening and project background research should be conducted as early as possible to determine the potential for environmental impacts. The GEPA checklist in the GDOT EPM provides a guide for the environmental topic areas that are required to be investigated and reported.

If the project is locally let, then the project sponsor is the applicant for the USACE 404 permit if a project warrants a permit. If the project is let by GDOT, then the permit applicant is GDOT and the permit must be reviewed and approved by the RPM prior to submittal to any applicable permitting agency. It should be noted that the 404 permit is a federal action and Section 106 of the National Historic Preservation Act (NHPA) requires documentation of the archaeological and historic resources within the project's permit area(s).

Local, State, and federal projects, regardless of letting responsibility, are required to coordinate with the Georgia Department of Natural Resources (GDNR) regarding the National Pollutant Discharge Elimination System (NPDES) permit requirements and obtaining applicable stream buffer variances and mitigation requirements.

It is important to recognize the context within which the project resides to identify required documentation. For instance, projects that cross federal jurisdictions such as the national highway system's right-of-way are required to provide documentation under the NEPA process since the project falls within the federal jurisdictional boundaries. All federal requirements must be followed for any phase of the project which will require a federal action.

ENVIRONMENTAL DOCUMENTATION

The responsible party for completion of the project's Environmental Documentation shall have the experience and qualifications, or retain the experience and area class qualifications necessary to complete local, State, and federal processes to ensure that applicable requirements are being met. The RPM is responsible for certification that all environmental requirements are satisfied regardless of letting responsibility.

The Environmental Documentation is one step in a series of approvals for a project to achieve construction authorization. Early coordination with parties that have jurisdiction over the project will help clarify requirements and avoid unnecessary delays. The responsible party for completion of the project's Environmental Documentation should identify critical path tasks in the schedule and manage these tasks to expedite the delivery of the Environmental Documentation whether following the Local Administered Project (LAP), GEPA, NEPA, or permitting processes.

Funding Source	Environmental Requirements	Permit Applicant	Guidance Manual	Review / Approval
Federal	NEPA	GDOT	PDP	GDOT / FHWA
TIA Funds – GDOT delivery	GEPA	GDOT	TIA Manual	GDOT
TIA Funds – Local Delivery	GEPA	Project Sponsor	LAP	Permitting Agency

Efficiencies in the process should be considered and may include, but are not limited to initiating right-of-way acquisition concurrently with the local environmental process to expedite project delivery. Elements of risk are inherent in allowing concurrent activities rather than the typical sequential activities; however, these risks must be identified and actively managed by the project sponsor.

CHAPTER 7: ROAD DESIGN

TIA funded projects shall be in accordance with the policies, guidelines, and standards published and referenced in the *GDOT Design Policy Manual*, the design criteria published in the *AASHTO-A Policy on Geometric Design of Highways and Streets* and *AASHTO-A Policy on Design Standards Interstate System*, the guidelines and standards published in the *FHWA Manual on Uniform Traffic Control Devices*, and the *Transportation Investment Act of 2010 Manual – Processes and Procedures*, as may be amended from time to time.

All current *GDOT Standard Specifications for the Construction of Transportation Systems*, current edition, as supplemented by the *Supplemental Specification Book*, current edition, Special Provisions, Supplemental Specifications, Standard, and Details as may be amended from time to time will be used in the design and construction of all projects unless directed by the Chief Engineer

SURVEY AND MAPPING

Survey, mapping, topography, Right-of-Way, property lines shall be completed in accordance with the *GDOT Survey Manual*.

SOIL SURVEY

Soil survey(s) will be completed for all TIA funded projects unless the EOR provides acceptable justification for not performing the soil survey. The soil survey(s) will follow the requirements and guidance set forth in *GDOT's PDP*, in *GDOT's Guidelines for the Geotechnical Engineering Manual*, and by *GDOT's Office of State Materials Engineer*. Furthermore, the soil survey must be accepted prior to the Field Plan Review (FPR).

The soil survey(s) should be coordinated and developed as soon as possible to provide safe, effective and cost-efficient recommendations for the project design. The RPM will have the authority to accept all soil surveys for projects Off- System. *GDOT's Office of State Materials* will be responsible for providing acceptance for all On-System projects.

PAVEMENT EVALUATION AND DESIGN

On-System: All proposed pavement design submittals for all On-System projects shall be developed in accordance with *GDOT's PDP* and *GDOT Pavement Design Manual* and must be accepted by the RPM.

Off-System: The pavement evaluation and design shall follow local guidelines and recommend practices established by the Local Government. All proposed pavement design submittals for local projects that are Off-System routes shall be accepted by the RPM. *GDOT* may review and recommend pavement types if the RPM or the EOR makes the request to do so. The final decision will be made by *GDOT*.

The pavement design should be a 20 year design life. The designer should reduce/remove sections thickness and/or layers from the top of the pavement structure and not from the base or subgrade should the 20 year design not be achievable.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

All TIA funded projects must comply with the MS4 permit for those areas outlined in the MS4.

Provisions in the MS4 permit allow GDOT to present evidence to the Environmental Protection Division (EPD) regarding why certain control measures are not feasible or reasons why a project should be exempt from their Storm Water Management Program (SWMP). Extra attention should be undertaken by the RPM and EOR for each control measure, especially post-construction Best Management Practices (BMP) for the SWMP, to determine its feasibility for implementation on the project.

TRAFFIC OPERATIONS

TIA projects that are On-System or GDOT let, regardless of funding, will follow the GDOT PDP process for the installation of all traffic control devices.

The option of implementing minor traffic signal control, sidewalk or highway signing and pavement marking projects without construction plans and specifications will be reviewed and approved by the RPM on a case by case basis.

Roundabouts

For 100% TIA funded On-System projects, a roundabout is still recognized by GDOT as a viable intersection alternative and the EOR is encouraged to evaluate the use of roundabouts. Peer reviews of roundabouts are required unless the RPM and/or the Chief Engineer determines otherwise. See Chapter 8 of the *GDOT Design Policy Manual (DPM)* and State website for Modern Roundabouts.

Traffic Control Signals

Traffic control signal permits approved by the GDOT Chief Engineer will be required for all new traffic control signals installed for On-System TIA projects only. Off-System TIA projects with new traffic control signals will follow MUTCD's requirements and will be approved by the local agencies in accordance with the MUTCD.

Highway Signing and Pavement Markings

For all TIA projects, highway signing and pavement markings will be installed in accordance with the MUTCD. For On-System TIA projects, highway signing and pavement markings will also conform to the *GDOT Signing and Marking Design Guidelines*.

All memorial or dedication signs shall be replaced or reinstalled in the same general area for all TIA projects.

Modification of posted speed limits will follow existing procedures in accordance with State Code and local ordinances.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

TIA projects which include federal Aid or State funds and local funded projects on the State highway system will follow the GDOT PDP process for the installation of all ITS improvements. The installation of ITS improvements on TIA projects which include local funding on Off-System highways will follow the project development process outlined in the TIA Manual. The

installation of ITS improvements on LAP projects with local funding will follow the project development process outlined in the latest version of the *GDOT LAP Manual*.

The option of implementing minor ITS projects without construction plans will be reviewed and approved by the RPM on a case by case basis.

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CHAPTER 8: BRIDGE AND STRUCTURAL DESIGN

Bridge projects that are TIA funded but also receive any Federal or State funding will be designed following the GDOT PDP manual and all policies, procedures and manuals required by GDOT. Projects funded with 100% TIA funds are not required to follow the federal process or the full GDOT PDP process. Bridge projects that will only receive TIA funds will be designed using the process that is detailed in this section of the TIA Manual. Bridge plans at a minimum shall include scope/concept, preliminary bridge layouts including hydraulic and hydrological studies as necessary, and final bridge plans.

The design and construction of any bridge that is being funded using 100% TIA funds must follow the policies and guidelines that are in the most recent edition of the *GDOT Bridge Design Policy Manual* or GDOT LRFD Bridge Design Policy Manual as well as the most recent edition of the AASHTO Bridge Design Specifications, either the 17th Edition of the Standard Specifications or the most recent Load and Resistance Factor Design LRFD Specifications. The Bridge DPM or Bridge LRFD DPM guidance supersedes AASHTO guidelines if there is conflicting information or guidance.

ON-SYSTEM BRIDGE DESIGN PROJECTS

Projects will be classified as either On-System or Off-System.

On-System bridges will be maintained and inspected by GDOT following the completion of construction. If the project is on or over the interstate, FHWA coordination will be required and may involve submitting plans to FHWA for review, but only bridges on projects receiving federal funding will require the GDOT PDP to be followed. Otherwise this TIA Manual will apply.

OFF-SYSTEM BRIDGE DESIGN PROJECTS

Off-System bridges will be inspected by GDOT and maintained by the Local Government entity following Final Acceptance of the project. An intergovernmental Agreement between GDOT and the Local Government will define the maintenance responsibilities for Off-System bridges.

TIA BRIDGE DESIGN PROJECT RESPONSIBILITIES

The roles and responsibilities of GDOT, Local Government, RPM, and consultants as they relate to bridge design on TIA projects are outlined below.

GDOT Office of Bridge Design

On projects that are On-System, regardless of fund source, the GDOT Office of Bridge Design will be responsible for providing the necessary submittal reviews, guidance and design acceptance as required by the PDP.

For Off-System projects, the Office of Bridge Design will perform compliance audits on randomly selected projects. These projects will receive a complete review to ensure adherence to GDOT's design policies and design requirements.

Regional Program Manager

For Off-System projects, the RPM may review bridge plans to ensure that they are in compliance with the project requirements. The design and plan reviews will be “peer” review in nature and will be conducted at the completion of the preliminary design and final design stages. The peer review will consist of reviewing the design drawings for completeness, compliance with GDOT requirements and constructability. It is expected that the bridge plans and designs will be similar to a typical set of GDOT Bridge plans in quality and presentation. Reviews are not meant to be a substitute for the EOR’s quality control measures, rather the RPM will comment on plans that appear to be of substandard quality.

The RPM will keep a record of all project documentation. For bridge projects this will include all correspondence, design calculations, drawings, reports and studies. This information will be stored electronically at a minimum.

The RPM will be responsible for review and approval of shop drawings during the construction phase. All shop drawings, RFI's and construction related correspondence will be submitted to the RPM for distribution to appropriate review personnel. It will be the RPM's responsibility to ensure that contractor submittals and RFI's are addressed in a timely manner.

The Office of Bridge Design may review shop drawings if specifically requested to do so by the RPM or Local Government, and only if the project has an available budget. If the project requires that GDOT must review the shop drawings then that requirement and schedule should be established prior to the start of the final design phase.

All shop drawings, RFI's and construction related correspondence will be submitted to the RPM for distribution to appropriate review personnel. It will be the RPM's responsibility to ensure that contractor submittals and RFI's are addressed in a timely manner.

The RPM will be responsible for selecting bridge projects for random audits by the Office of Bridge Design.

Engineer of Record

The EOR will be responsible for the development of the bridge and structures designs and plans following the GDOT design policies for structures. Every bridge design must be developed by a licensed engineer registered in Georgia who specializes in structural design. The engineering firm shall be one that is listed in the approved GDOT prequalification for Area Class 4.01, 4.02, and/or 4.04. Engineering firms not included in the Area Class prequalification must submit an application and become prequalified with GDOT in the area class necessary for the project.

The EOR will be responsible for ensuring the designs developed are complete, accurate and constructible. Construction plans should be of sufficient quality to ensure that the contractor can easily understand the design and how the bridge can be constructed in the field. If errors occur during construction due to errors on the bridge plans, the EOR is responsible to provide a remedy at no additional cost to the project. The EOR may be held responsible for covering the additional contractor costs, liquidated damages or legal claims as a result of errors in the plans.

The EOR will develop Load Rating Reports for each bridge designed. Reports will have a statement that certifies the bridge rates at a minimum design level and that the bridge does not require posting for current state legal loads. The statement will have the seal and signature of the PE who performed the load rating next to the certification statement. Load Rating Reports will be submitted to the RPM for review and the Office of Bridge Design for acceptance prior to project letting to verify the certification statement of the load capacity. A copy of the Load Rating Report will be submitted to Office of Bridge Maintenance as well for the maintenance record.

If an independent load rating shows that the capacity is less than 95% (<95%) of design load, the EOR will be held responsible for covering the additional design and construction costs associated with correcting the deficiency in order to bring the bridge into compliance with load carrying capacity.

During construction the EOR will provide technical support and shop drawing reviews for the bridge under construction. Technical support will consist of answering contractor RFI's, attending project status meetings and making site visits as needed to resolve problems or issues in the field. Shop drawing reviews will be required for bridge elements fabricated off-site and will include but are not limited to the beams (concrete or steel), bearings and deck forms.

BRIDGE DESIGN REQUIREMENTS

Design Specifications

Bridges will be designed using the most recent editions of *The Georgia DOT Standard Specification Construction of Transportation Systems, 2001 Edition*, *GDOT Bridge Design Policy Manual*, *GDOT LRFD Bridge Design Policy Manual*, and the AASHTO Bridge Design Specifications. It is preferred that new bridges be designed using the latest *AASHTO LRFD Design Specifications for Bridges* but this will not be required in all cases. The following are the guidelines for which AASHTO Bridge Design Specifications to use depending on the type of project under design:

- Bridge widening projects may utilize the AASHTO Bridge Specification in place at the time the bridge was originally designed or current version.
- NEW Off-System Bridges must, at a minimum, be designed using the *AASHTO Standard Specifications, 2002, 17th Edition*.
- NEW On-System Bridges (Non-Interstate) must at a minimum be designed using the *AASHTO Standard Specifications, 2002, 17th Edition* but LRFD Specifications are encouraged for these bridges since they could be eligible for federal funding.
- NEW On-System Bridges (Interstate) must be designed using the latest LRFD Design Specifications for Bridges since they will receive FHWA full oversight.

Bridge Superstructure

Timber bridges, masonry bridges and structural plate arches are not allowed. Bridges shall not use intermediate hinges.

Bridge decks should be detailed to minimize the number of deck joints wherever possible. Joints should be located to provide for maintenance accessibility and future replacement. To the extent

possible the bridge superstructures, joints, and bearings should be made accessible for long-term inspection and maintenance.

The use of fracture critical members is strongly discouraged. If they must be used then written authorization from GDOT will be required. Fracture critical members must be designed to allow full access for inspection.

Steel and concrete box girder superstructures must be accessible without impacting traffic below. Box girders or box beam pier caps require a minimum inside depth of six (6) feet to facilitate interior inspection. The design must include access openings of 3'-0" diameter minimum into all cells, and between cells of the girders or pier caps to allow free flow of air during inspections. A hinged outside access opening cover must be provided. The hinge will be located on the inside of the box girder.

Bridge Foundations

Foundations for bridges constructed over rivers, creeks and lakes shall be designed so that the foundation will withstand predicted scour depths. The BFI and Hydraulic report will confirm the scour potential at the bridge.

Foundations shall be designed based on allowable stress methodology in accordance with GDOT and AASHTO Standard Specifications guidelines.

Bridge Railing and Barriers

All barrier systems shall meet current crash test and other safety requirements as determined by GDOT. Table 1 lists approved GDOT Bridge Railing Standards, which GDOT will update upon request.

Table 1: GDOT Standard Bridge Railing

BRIDGE BARRIERS, PARAPETS AND RAILS		
Description	Std Name	Rev Date
With Sidewalks		
Concrete Parapet (42" tall – 13" wide)		
Concrete Parapet (27" tall- 13" wide) w/Std 3626 (42" tall total)		
Concrete Parapet (34" tall – 13" wide) w/Std 9031N Chain Link Wire Fence for urban area bridge over an Interstate or other limited access highway or a railroad"		
No Sidewalks		
Concrete Jersey Barrier (32" tall) w/ 9" top (No Bicycle route)		
Concrete Type "S" Barrier (42" tall)		
COMBINATION RAILS/FENCES		
Description	Std Name	Rev Date
One-Pipe Aluminum Handrail for mounting on parapets (14.75" high rail)	3626	10-64
Chain Link Wire Fence for mounting on top of parapets	9031N	06-81
Pipe Handrail for mounting on top of parapets & modified barriers	9031R	10-88
ARCHITECTURAL RAILS		
Description	Std Name	Rev Date
Texas Rail (to be used only with GDOT Bridge Office approval)		
Kansas Corral (to be used only with GDOT Bridge Office approval)		

BRIDGE CONCEPT LAYOUTS, PRELIMINARY LAYOUTS/HYDRAULICS STUDY AND COST ESTIMATES

Concept Layout

Concept bridge layouts and typical sections will be developed for Concept Reports if required. The concept layout will consist of a plan view of the proposed bridge showing the bridge span configuration, bridge width, travel lanes, sidewalks and parapets. A typical section should also be provided. This will be included in the Concept Report for the project. A concept cost estimate should be developed based on the concept layout.

Preliminary Bridge Layouts and Hydraulic and Hydrological Study Reports

Preliminary Design Packages will be required for all GDOT let projects. Local Let projects will not require Preliminary Design Packages unless locally required, however even if not required a Preliminary Design Package is strongly recommended to ensure acceptance of the bridge layout at an early phase of the project so that any revisions will have minimal cost and schedule impacts.

Preliminary bridge layouts must show all required crossing information as outlined in the Bridge Design Policy Manual. If a Hydraulic and Hydrological Study Report is required then it must follow the guidelines and policies in the GDOT Drainage Manual. The Hydraulic and Hydrological Study Report must include the Preliminary Bridge Layout in the study appendices. The GDOT Drainage Manual outlines the content and format of the hydraulics report.

A preliminary cost estimate for the bridges shall be prepared using the latest cost data from GDOT. The square foot cost provided in the Bridge DPM or the most recent GDOT Item Mean Summary Data may be used. It is important that the estimate developed at this stage of the project is as realistic as possible.

GDOT will require Hydraulic and Hydrological Study and Preliminary Bridge Layouts to be accepted prior to advancing to the next phase regardless of funding sources.

GDOT/RPM Coordination at Preliminary Phase

Close coordination with GDOT and/or the RPM through the preliminary stage is critical in order to keep the projects on track and determine if additional funding will be required or if project scope must be reduced to meet the TIA funded budget.

FINAL DESIGN AND REVIEWS OF BRIDGE PLANS

Final design

Final design and detailing of bridge plans for all projects will follow the requirements of the GDOT Bridge DPM and the AASHTO Bridge Design Specifications. The requirements of the GDOT Bridge DPM will supersede AASHTO in instances where there is a conflict or discrepancy between the two guidelines.

Design Calculations and Computer software

For bridges designed using the AASHTO Standard Specifications, the EOR is encouraged to use the GDOT Bridge PC Based design programs that are available at no cost from GDOT. For

Bridges that must be designed using the AASHTO LRFD Bridge Design Specifications, it will be necessary for the EOR to use software that is capable of designing the bridge using the LRFD Specifications. Software may be developed by the EOR or may be purchased. Hand calculations or calculations using computer spreadsheets are acceptable.

Design calculations will be required for all portions of the bridge that are designed. Calculations should be checked for accuracy in accordance with the EOR's internal quality assurance policy.

Detailing

Bridge plans and details shall follow the requirements of the latest GDOT Bridge Detailing Guide where applicable. Final plans will be of sufficient detail and quality to let the project for construction.

Final Estimate

A final construction estimate for the bridge will be required prior to letting the project. The estimate should be developed using estimated final quantities of materials and the GDOT bid prices.

Reviews

Bridges that will be constructed On-System will require final plans to be reviewed by the GDOT Office of Bridge Design, regardless of fund source.

Off-System Bridge Plans are subject to compliance audits by GDOT to ensure GDOT policies are being adhered followed. The scope of an audit for bridge projects will include, but is not limited to:

- Preliminary bridge layout / Hydraulics/Hydrological reports
- Bridge/wall foundation investigation and recommendations
- Final bridge design calculations
- Final Bridge plans, quantities and construction estimates

Comments from the audits of the plans will be made available to the RPM and EOR. These comments will be required to be addressed and accepted by the Office of Bridge Design prior to letting.

Load Rating

The EOR will submit a Load Rating Report with statement certifying ratings for the design vehicle and the state legal loads of the bridge. The report will be stamped by an engineer registered in Georgia. Load Rating procedures found in AASHTO's *The Manual for Bridge Evaluation*, current edition, shall be followed. Bridges designed using the AASHTO Standard Specifications can be rated using either LFR or LRFR methodologies. Bridges designed using the AASHTO LRFD Specifications must be rated using LRFR methodologies. The completed Load Rating Report and Statement of Certification will be submitted to the Office of Bridge Design for acceptance prior to the letting date of the project.

BRIDGE FOUNDATION INVESTIGATIONS,

A Bridge Foundation Investigation (BFI) will be required for all bridge projects regardless of the funding source. In the case of bridge replacement projects where the BFI for the existing bridge is available, it may be used in lieu of a new BFI Report. Prior to undertaking a TIA project, an initial search shall be undertaken with GDOT to ascertain if existing GDOT Office of State Materials Engineer approved BFI Report(s) are available for use. The BFI will make all necessary recommendations for the project and will follow the format required by the GDOT Office of State Materials Engineer. The BFI is submitted for review by the RPM and approval by GDOT if bridge is on-system.

BRIDGE DECK AND BRIDGE CONDITION SURVEYS

Bridge Deck and Bridge Condition Surveys will only be required for bridges that will be widened and/or rehabilitated. The RPM will be responsible for providing the deck and bridge condition surveys for these projects. The Bridge Deck Condition survey shall be submitted to the Office of State Materials Engineer. The Bridge Condition Survey shall be submitted to the Bridge Maintenance Unit. A copy of each report shall be submitted to the Office of Bridge Design.

The recommendations proposed in Bridge Condition and Bridge Deck Survey reports provided by the RPM shall be incorporated into the final design of the bridge.

BOTTOMLESS CULVERTS

Bottomless or three-sided culverts may be used on projects if needed to address environmental concerns. The culverts are precast concrete sections that are founded on spread footings or pile supported foundations. Foundations for these structures must be designed so that they withstand the predicted scour depth. A hydraulics report and BFI are required in order to design the foundations correctly.

WALL FOUNDATION INVESTIGATIONS

Prior to undertaking a TIA project, an initial search shall be undertaken with GDOT to ascertain if existing GDOT Office of State Materials Engineer approved Wall Foundation Investigations (WFI) reports are available for use. The Office of State Materials Engineer shall review and accept any new WFI reports for projects On-System. The RPM will accept any new WFI reports for Off-System projects. The Office of State Materials Engineer will review these new reports for Off-System route projects if requested and feasible.

RETAINING WALLS

Retaining walls will be designed according to the guidelines in the GDOT Bridge DPM. Use of GDOT standard walls and contractor designed walls is encouraged wherever possible.

A WFI will be required for walls as recommended by the GDOT Bridge DPM.

For GDOT Let projects, wall layouts will be submitted with the preliminary design package for acceptance. For Local Let projects it is recommended that wall layouts be submitted with the preliminary design package for acceptance.

SHOP DRAWINGS, AS-BUILT PLANS AND RFI'S

Review of Shop drawings will be performed and approved by the EOR. The RPM will keep a record of all shop drawing submittals and approvals over the course of the project. This record will be turned over to the Local Government and/or GDOT at the conclusion of the project. The EOR will review shop drawings to ensure that fabrications are consistent with the designer's intent. A partial list will include, but not be limited to:

- Structural steel framing
- Precast, prestressed concrete beams
- Precast segmental concrete units
- Bearings
- Expansion joints
- Sound Barriers
- SIP deck forms

Review may be required for major items of temporary works that might affect the public, impose significant loadings on the permanent works, and/or require an engineered design. A partial list includes, but is not limited to:

- Temporary structures
- Cofferdams
- Falsework, shoring and formwork
- Superstructure erection
- Construction staging and traffic control
- Demolition of existing structure

Requests for Information (RFI) will be coordinated between the RPM, Local Government Agency (if required) and the EOR. The RPM will keep a record of all RFI submittals and outcomes over the course of the project. This record will be turned over to the Local Government and/or GDOT at the conclusion of the project.

As-Built Plans will be prepared for structures on the project. This will include the as-built foundation drawings as well as the construction documents used for the structure, noting all field change corrections made to the drawings. As-built drawings will be the responsibility of the RPM to maintain and transfer to the appropriate project sponsor upon project closeout.

DELIVERABLES

- For On-System bridge projects and projects let by GDOT, the deliverables will be in accordance with GDOT PDP and Bridge DPM.
- For Off-System bridge projects let by the Local Government, the following will be required to be turned over to GDOT, at a minimum:
 - Design or As-built Plans
 - As-built Foundations
 - Hydraulic Report and Scour Analysis
 - BFI used for design
 - Shop Drawings

CHAPTER 9: COMPLIANCE

PREQUALIFICATION

All consultants shall be prequalified in the area classes or certified by GDOT as appropriate for the work being performed. All professional services will be procured using a Qualification Based Selection (QBS).

FIELD PLAN REVIEW

The RPM is responsible for facilitating plan reviews, preparing reports, reviewing any responses to the reports and distributing final reports.

One FPR is required for all TIA projects, and should be conducted at the 80% to 85% plan completion level. The Environmental commitments shall be known prior to the FPR. In addition, the soils report, if required, shall be complete prior to the FPR if it is being developed for any given project. GDOT staff shall be invited to the FPR; however, GDOT participation in the FPR is not required with the exception of the TRC. During FPR strong consideration must be given to the effect any particular comment(s) would have on scope, schedule and budget.

There may be more than one FPR if requested by the EOR and approved by the RPM; especially for complex projects where conditions warrant. Possible examples could include projects that have a large number of right-of-way or utility impacts. The decision of the RPM on whether to conduct more than one FPR shall be final.

Early coordination between all stakeholders is highly encouraged and is critical since only one FPR is required. In order to achieve expeditious delivery, the environmental and right-of-way activities may be performed concurrently.

SPECIAL PROVISIONS

The RPM will facilitate reviews of any supplemental specifications or special provisions and will make any necessary decisions regarding special provisions.

GDOT's Office of Engineering Services shall review and comment on special provisions that are added as a result of the need for new pay item(s) for GDOT let projects.

ENVIRONMENTAL COMPLIANCE

GDOT's Environmental Compliance Bureau will have oversight responsibility for all projects let by GDOT. It is the responsibility of the RPM to ensure compliance with environmental commitments and NPDES permit requirements.

DESIGN-TO-BUDGET

Projects will be designed to the project budget as established in the Approved Investment List(s). Each project must be delivered as presented in the Special District's Approved Investment List(s). The Project Scope shall be based on achieving the public benefits noted and satisfy the project description and project cost. The EOR should take a practical design approach so to provide the most cost efficient design possible that satisfies the project scope.

Should the project budget be determined to be insufficient, the engineer will have flexibility on certain project elements that may be modified by order of precedence as referenced below to reduce project cost necessary to bring the project into alignment with the budget. The cost estimate at the concept stage should identify any scope reduction that causes the description or project benefits not to be satisfied so to meet the budget. Cost estimates shall be completed as necessary and the estimates will be evaluated at least semiannually throughout the development process to track cost to complete budget requirements.

Below is the order of precedence of project elements that the engineer should use in designing to budget, without compromising applicable engineering guidelines and standards. The list starts with the most important elements to the items of less criticality.

1. Safety features
2. Structural members and appurtenances
3. Pavement Structure
4. Typical sections
5. Operational features
6. Aesthetic and enhancements (unless necessary to satisfy scope)

VALUE ENGINEERING

A VE Study is not required for 100% TIA funded projects due to the nature of the practical design and Design-to-Budget methodology that keeps quality, functions of product and original purpose of the project.

When a TIA project includes State and/or Federal funds and has an estimated total cost of \$10 million dollars or more, then a VE Study will be required. Total cost estimate includes cost for preliminary engineering, Right-of Way, construction and reimbursable utilities. The Office of Engineering Services will coordinate the VE Study.

LOCATION AND DESIGN PROCESS

If right-of-way or easement is being acquired for any TIA project, the Location and Design (L&D) approval will be required prior to beginning an action for condemnation. The current GDOT L&D process is to be followed and will be the responsibility of the RPM or Local Government. The L&D process can precede after final alignment and the extent of the impacts are known. The RPM shall fill out the L&D form and coordinate advertisement with GDOT's respective District and Area Office. Once L&D is advertised, the condemnation process may begin.

CHAPTER 10: DESIGN EXCEPTIONS / VARIANCES

GDOT requires all Design Exceptions (DE) and Design Variances (DV) to be submitted and reviewed by GDOT's Office of Design Policy & Support (DP & S) regardless of funding source. It is highly encouraged that any DE/DV be discovered and introduced at the concept stage or as early as possible. The Concept Report should identify these variations and should include them in the report for review and approval. If a DE and/or DV are to be obtained, then the format and procedures outlined in the GDOT PDP and in the GDOT DPM are to be followed, except for the requirements described by the TIA Manual.

For all projects that are not Interstate projects and without federal funding, GDOT's Chief Engineer shall approve all DE and DV. These DE and DV reports will be submitted as follows:

- RPM for review and concurrence. Copies sent to the TRC and TIA Office.
- Chief Engineer for approval following the process outlined in the DPM. Copies sent to the RPM, TRC, and TIA Office.

CHAPTER 11: UTILITY AND RAILROAD

All utility standards and policies outlined in the *GDOT Utility Accommodation Policy and Standards Manual*, current edition, also referred to as the GDOT Utility Accommodations Manual (UAM), will be used for TIA projects. The RPM will provide for Regional Utility coordination unless otherwise noted below. Furthermore, all existing policies and procedures governing railroads and railroad coordination will be used for TIA projects.

UTILITY ACCOMMODATION STANDARDS

For TIA projects falling under GDOT responsibility, all utilities, whether privately or publicly owned, when occupying or crossing any part of the right-of-way of the State Highway System, Political Subdivision local roads and streets, County Road System or Municipal Street System will be required to comply with the policies and standards set forth in the UAM.

There may be circumstances where some variances to the UAM may be considered to accommodate the Utility Owners, GDOT, counties, municipalities, contractor's, property owners, locally impacted businesses or potentially affected third parties. Variances will be addressed on a case by case and project by project basis. Project Utility Special Provisions will be required to cover any approved variances and all variances must be approved by GDOT's State Utilities Office prior to implementation.

To ensure reasonably uniform practices throughout the State, Local Let projects shall incorporate and utilize GDOT's UAM or similar policy for relocation, adjustment and accommodation of utilities as long as it is not more restrictive than the current UAM.

GENERAL REQUIREMENTS

A number of existing Utilities may be located within or in the vicinity of the existing or proposed ROW of TIA projects, some pursuant to statutory rights or written permission and some pursuant to property rights. Certain of those existing Utilities may need to be relocated or otherwise adjusted in order to accommodate TIA projects. This Chapter establishes procedures and requirements for Utility Relocations, including such processes as coordination with Utility Owners, preliminary engineering, construction and other activities necessary for Utility Relocations, and the required documentation.

UTILITY COORDINATION

Effective coordination, communication, cooperation and commitment between GDOT's RPM, Utility Owners, Georgia Utility Coordinating Council (GUCC), Georgia Utilities Protection Center (UPC/811), railroads, municipalities, counties, contractors, and consultants are the main keys for successful utility coordination.

ROLES AND RESPONSIBILITIES

The RPM is assuming the roles and responsibilities of GDOT's District Utilities Engineer as outlined in the UAM and as the respective County and Municipal Utilities Engineer. The RPM shall be employed by a firm that is prequalified in GDOT's area class 3.10 Utility Coordination. In addition, the RPM will be the regional railroad liaison and assist with utility right-of-way issues. The RPM will assist the project contractors in accomplishing all Utility Coordination from

Project Concept to project closeout. The RPM will coordinate, provide direction and assist the contractor, railroads and the utility owners in the Utility Coordination process.

UTILITY OWNER RESPONSIBILITIES AND REQUIREMENTS

Utility Owner's responsibilities and requirements will remain the same as outlined in the UAM, but will be coordinated through the RPM.

UTILITY AND RAILROAD CERTIFICATION REQUIREMENTS

Certification requirements will remain the same as outlined in the UAM, but will be coordinated through the RPM instead of State and District Utilities Offices.

UTILITY REIMBURSEMENT REQUIREMENTS

The obligation of GDOT, counties, and municipalities, regarding reimbursement to Utility Owners for eligible costs of Utility Relocation Work is outlined in the UAM.

RECORD KEEPING

The RPM shall ensure that utility construction and inspection records are maintained in order to ascertain that Utility Relocation Work is accomplished in accordance with the terms and in the manner proposed on the approved Utility Work Plan and the applicable Utility Agreement.

Documentation forms currently used by GDOT, counties and municipalities will be used for utility relocation whenever possible. When new documentation forms, such as a variance, are required, approval will be required from the relevant governmental agency and GDOT State Utilities Office. Utility owners will be notified in writing within ten (10) calendar days prior to any documentation form changes and its respective implementation.

UTILITY AND RAILROAD OWNERS MEETINGS AND CORRESPONDENCE

The RPM will be responsible for holding meetings and otherwise communicating with Utility and Railroad Owners as necessary to timely accomplish any required Utility Relocations on GDOT let projects.

At least ten (10) calendar days in advance of each scheduled project utility and railroad meeting, the RPM shall provide written notice and an agenda for the meetings with the appropriate Utility and Railroad Owner. The RPM shall prepare and distribute minutes via US mail and/or electronic mail of all meetings within seven (7) days after the date of the meeting with Utility and Railroad Owners and shall keep copies of all correspondence between RPM and any Utility and Railroad Owner.

CHAPTER 12: RIGHT-OF-WAY

GENERAL ACQUISITION REQUIREMENTS

Title 32 should be used for all Right-of-Way (ROW) acquisition regardless of who acquires the ROW for the RTR projects, see O.C.G.A. § 32-3-1, *et seq.*

All ROW acquisition will be performed in accordance with the applicable sections of the GDOT Right-of-Way Manual. All reviews and approvals noted in the GDOT Right-of-Way Manual to be completed by GDOT ROW Office staff will be completed or coordinated by the RPM. Payments to property owners and reimbursements for local acquisitions will be paid out of TIA funds through a reimbursement process developed by GDOT. All consultant acquisitions must be performed by GDOT prequalified ROW consultants for each level of work being performed during the acquisition process.

CONDEMNATION

Condemnation of a property requires approval of the project L&D and L&D advertisement. See Design Policy Section for additional information. Condemnation should not be used for advanced acquisitions on TIA projects. ROW plans that are approved at the time of the condemnation petition convey the impacts of ROW acquisition for the condemnation proceeding. Any design changes after the condemnation petition has been filed will not be reflected in the condemnation proceedings. All ROW to be acquired at the time of the condemnation filing will be acquired through that process; additional ROW needs for a condemned property will be treated as a new acquisition. The condemnation petition will not reflect design changes that occur after the condemnation filing which change the ROW footprint impacted. For projects where the ROW is to be acquired in the name of GDOT, a Special Assistant Attorney General (SAAG) is required for all condemnation proceedings. If it is determined that SAAG services are needed, the RPM will send a request to the Office of Right of Way Funding and Certifications Unit that a SAAG be assigned to the project. This request must include Project Number, PI#, and charging information for the SAAG billing.

PLAN AND BUDGET APPROVALS

The RPM is responsible for reviewing and approving ROW plans for 100% TIA funded projects. The RPM is also responsible for establishing a ROW budget and ensuring the project scope and cost is within budget.

ROW CERTIFICATION

ROW for 100% TIA funded project is certified by the State TIA Administrator.

RECORD KEEPING

ROW plans shall be uploaded and stored in Trans-Pi. The RPM is responsible for coordinating the submittal of approved ROW plans to the Electronic Document Management Office.

Current GDOT project management software should be used to track the ROW acquisition process for all projects. The RPM is responsible for ensuring the project management software is current on all projects within the Special Districts.

ADVANCED ROW ACQUISITION

Advanced ROW acquisition should be used for total takes only and can be used if the project meets one of the following:

- A substantial monetary savings (time or cost),
- The enhancement of the integration of highways with public or private urban redevelopment, or
- The forestalling of the physical or functional obsolescence of highways.

ABBREVIATED VALUATION METHODS

Abbreviated Valuation Methods may be used in compliance with procedures outlined in GDOT ROW Manual. Deviation from these procedures is granted for the monetary threshold. The monetary threshold has been raised to \$50,000. All other procedures must be followed.

ROW BROCHURE

A copy of the ROW brochure with confirmation receipt is to be provided to all property owners from whom ROW is being acquired.

ROW ACQUISITION MANAGEMENT

The project delivery team will establish a detailed cost estimate for the project and ensure acquisition costs are within the project budget. The project team appraiser generates the property estimate for Market Value. The RPM review appraiser approves Market Value and serves as an appeals officer.

Local ROW acquisition

Local ROW acquisition is eligible for reimbursement for both administrative and real property value up to amount specified in the IGA for each project. ROW acquisition costs that exceed the amount agreed upon in the IGA are the responsibility of the Local Government. Local Governments must provide a Detailed ROW Cost Estimate to the RPM for approval and Notice to Proceed (NTP).

Consultants procured by the Local Governments to acquire ROW can establish the Market Value for the real property.

TIA projects that cross county lines with ROW acquisition will require an IGA for acquisition services with each county acquiring the right-of-way.

GDOT ROW acquisition

The RPM will oversee the ROW acquisition being performed by the Right of Way consultant on the behalf of GDOT.

CHAPTER 13: PROJECT ADMINISTRATION

The project sponsor shall coordinate with RPM for the overall administration of each project regardless of sponsor for total transparency.

CERTIFICATIONS

The RPM is responsible for compiling all certifications and information required from the project delivery team prior to beginning another project phase or project letting. The RPM is responsible for certifying for each project the following items which include but are not limited to:

Environmental

- Completed and approved Environmental Document including all required special studies and preconstruction environmental commitments.
- All permits obtained.
- All mitigation requirements have been satisfied.

Right-of-Way

- All Right-of-Way has been acquired; or a plan for acquisition is in place that will not impact the construction schedule.

Utilities

- Completed and signed Utility Agreements for all utilities that are in conflict and are due reimbursement based on evidence of prior rights.
- Documentation that project has completed all requirements of the UAM.
- Plan sheets have resolved all known utility conflicts.
- Memorandums of Understandings (MOU) have been completed for projects on State or federally funded projects, where a Public Interest Determination (PID) has been made.

Work Authorizations

- The RPM is responsible for providing work authorizations for each phase or any sub phase of a project regardless of project sponsor or as otherwise specified in an intergovernmental agreement.

ADA Compliance Letter

- Project is ADA compliant (if applicable).

NPDES REQUIREMENTS

GDOT Let Projects: The EOR will prepare and submit ESPCP and NOI to the RPM for projects in accordance with the NPDES permit. The ESPCP and NOI shall be prepared in accordance with current GDOT and NPDES requirements. The RPM will review ESPCP and NOI for compliance with current NPDES permit requirements. Once the RPM considers the plans and NOI complete, the RPM will submit the ESPCP to Construction Bidding Administration (CBA). CBA will submit the NOI and ESPCP to EPD.

The RPM will coordinate with the EOR to address any EPD comments and resubmit plans until an acceptable response letter is obtained from EPD.

The RPM is responsible for coordination with GDOT's CBA for payment of the NOI fees.

Local Let Projects: The local government must certify compliance with all NPDES, Stream Buffer Variances, and any other requirements to the RPM.

LETTING SCHEDULE (GDOT LET)

The following is the schedule for submittals of certifications and other documents prior to project Letting:

Event	Weeks Prior to Letting*	Responsibility
Field Plan Review Held	20	Regional Program Manager
Submit Final Corrected Plans R/W Certification Utility Agreement Environmental Certification R/W Authorization	14	Regional Program Manager
Completed Final Plans/Special Provisions	10	Construction Bidding Administration
Construction Authorization	7	Regional Program Manager
Original Plans Uploaded to EDM	5	Design Policy & Support
Advertisements/Notice to Contractors	4	Construction Bidding Administration
Letting Date		

*All tasks shall be accomplished no later than the number of weeks shown in table.

CONTRACTOR AND SUBCONTRACTOR REQUIREMENTS

TIA projects will provide for equal employment opportunities for all as required by law. TIA projects must have a high standard of quality and workmanship provided by all contractors, subcontractors, vendors, and suppliers.

GDOT Prequalification Package

All contractors and subcontractors must be GDOT prequalified and comply with all current GDOT requirements including but not limited to Standard Specification Section 102 regardless of letting responsibility. Prequalification packages can be found on GDOT's website. The link to the website is included in the References Chapter.

Bonding and Insurance Requirements

Contractors must meet all bonding and insurance requirements set forth in the GDOT Standard Specifications or the Supplemental Specifications and the laws of the State of Georgia.

COST ESTIMATE

Cost Estimate Review

The EOR is required to prepare the project cost estimate in Trns•port Cost Estimation System (CES®) and submit it to the RPM at each stage of plan development, annually, or as necessary when the project cost significantly changes. The RPM will review CES® Estimate for compliance with the established project budget and coordinate with EOR should project scope or and cost estimate be modified.

Prior to each project plan submission, the RPM will refine the CES® Estimate to develop an accurate estimate. The final CES® Estimate shall be submitted to the Office of Engineering Services according to the approved bid package submittal schedule.

BID PACKAGE DEVELOPMENT – PS&E PACKAGE

Plans

The EOR is responsible for completing the Final plans and addressing all comments from the Field Plan Review.

The Final Plans are to be submitted to the RPM for review to ensure all comments have been addressed adequately and the plans are ready for letting.

Specifications, Special Provisions and Final Estimate

The EOR is required to develop all required Special Provisions for the project.

The RPM will compile all Special Provisions, Standard Special Provisions, and Specifications required for the project for inclusion in the bid package. The RPM will review and refine the EOR's CES® Estimate. The RPM will submit the completed bid package to the Office of Construction Bidding Administration for advertisement for GDOT let projects.

On Local Let projects, the project sponsor shall submit the complete bid package to the RPM for review and approval prior at least 14 days prior to advertising the bid. The RPM will give written notification to the sponsor that the PS&E are acceptable to bid.

DBE, SMALL BUSINESS AND VETERAN OWNED BUSINESS

On May 17, 2012, the Georgia Department of Transportation, acting by and through its Board, passed a resolution in which it:

- (1) reaffirmed its commitment to Title VI of the 1964 Civil Rights Act of nondiscrimination in the delivery and management of TIA funded projects and
- (2) encouraged the use of DBE's (including minority and woman owned businesses), small businesses, and veteran owned businesses in any project that is funded in whole or in part by TIA funds, and encouraged wherever practical and feasible, the local

government or governments that manage TIA funded projects to include the same in its delivery and management of a project.

Reference to this resolution shall be included in all contracts regardless of letting responsibility. Reporting of participation is required.

ALTERNATIVE DELIVERY

Alternative delivery methods such as Design Build (DB) allows the preconstruction and construction processes to be performed in a way that offers risk transfer, schedule efficiency and cost savings, while still complying with applicable federal and/or State requirements. The activities leading up to a DB contract procurement can vary greatly, depending on the specific goals of the project. It is the responsibility of RPM to direct DB costing plans and specifications packages and ensure that appropriate reviews take place. Costing plans are normally developed to no more than 30% percent level, depending on risk factors such as ROW, scope complexity, and schedule considerations. The level of plan completion may vary depending on the specific goals of the project. Not all projects are suitable for DB due to the schedule logic, scope ambiguity, risk profile, or other issues. Therefore, the RPM is charged with researching the Approved Investment List(s) for DB candidate projects and performing DB risk analyses to provide recommendations to GDOT for consideration and approval. Specific procedures and policies regarding DB usage are contained within the GDOT *Design Build Manual*.

BID REVIEW

GDOT Let Projects

GDOT will tabulate bids and review the submitted bids for irregularities including unbalanced bids. GDOT will compare apparent low bid with the Engineer's Estimate and the project construction budget to determine ability to award the project. The RPM will make a recommendation to the State TIA Administrator whether to award, defer, or reject the apparent low bid. Thereafter, the State TIA Administrator shall make a recommendation to the Bid Review Committee regarding award of TIA projects.

Local Let Projects

RPM will compare apparent low bid with the Engineer's Estimate and the project budget to determine the ability to award the project. The RPM will review the project to determine if it can be awarded and will make a recommendation to award, defer, or reject the apparent low bid. Should the RPM not concur in awarding the project, the local sponsor and the RPM will coordinate a resolution.

DISPUTE RESOLUTION

The RPM will be responsible for coordinating any dispute or claim that may arise with or among a Local Government, contractor or consultant. A formal dispute resolution procedure will be set forth in the contract between GDOT and the RPM as well as between GDOT and subsequent consultants performing the work.

Cancellation

GDOT has the ability to cancel and/or withdraw a project advertisement at any time and for any reason prior to letting. In addition GDOT expressly limits its contractual payment obligations to only those funds received from GSFIC as the result of the TIA revenue availability unless otherwise noted on the Approved Investment List(s) which may lead to postponement or cancellation of a project phase.

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CHAPTER 14: CONSTRUCTION ADMINISTRATION

PRECONSTRUCTION CONFERENCE

The RPM is responsible for coordinating a Preconstruction Conference with the CEI provider after project award but prior to the beginning of construction activities. The process outlined on the “The Source” will be used for the Preconstruction Conference.

CONSTRUCTION ENGINEERING AND INSPECTION

CEI must be performed for all projects. CEI shall be performed in accordance with all GDOT Manuals, Specifications, Plans, and Testing Requirements. GDOT Manuals include but are not limited to the GDOT Construction Manual, GDOT Bridge Manual, and GDOT Sampling Testing and Inspection Manual.

Audits During Construction

RPM will be responsible for conducting all audits both GDOT and Off-System. GDOT will conduct random audits for validation.

UTILITY RELOCATIONS/COORDINATION DURING CONSTRUCTION

The RPM and the EOR will coordinate with all Utility and Railroad Owners before project certification to determine conflicts, necessary relocations, utility adjustment schedules, and issuance of the Georgia Utility Permitting System (GUPS) permits.

See the Utility and Railroad Section of this TIA Manual, the UAM, the Construction Manual and GDOT’s associated Policies and Procedures for additional information regarding utility relocations and adjustments and railroad coordination.

SITE MANAGER

Site Manager will be the software used for all daily reporting, submittals, submittal tracking, materials certifications, testing reporting, and payments on all projects regardless of letting responsibility. The RPM and CEI Provider will be provided access to Site Manager by GDOT.

MATERIALS

All construction materials shall comply with current Qualified Product List requirements, GDOT Standard Specifications for the Construction of Transportation Systems, as supplemented by the Supplemental Specification Book, Special Provisions, Supplemental Specifications, Standards, and Details.

Quality Control (QC) and Quality Assurance (QA)

QC/QA must be performed in accordance with GDOT’s Sampling, Testing, and Inspection Manual, standard specifications, supplemental specifications, special provisions or any other sampling or testing requirements such as material provider’s recommendations.

Independent Assurance (IA) Testing

IA will be performed by GDOT on a random basis and as determined appropriate by the RPM or GDOT to ensure proper quality is achieved.

MATERIALS CERTIFICATIONS

The CEI Provider will complete Material Certifications to ensure all sampling and testing is completed as required for the project. Material Certifications are to be submitted and tracked through Site Manager. Material Certification will be required to ensure all materials used in the Work are acceptable.

INVOICE REVIEW/APPROVALS

The CEI Provider, regardless of letting responsibility, will submit construction payment request through Site Manager to the RPM. The RPM is responsible for reviewing and approving all construction reports/invoices and submitting them to the TIA Office. The Commissioner will certify the completion of project element or project completion to GSFIC for payment/reimbursement by GSFIC to the Department. Payment will be made upon receipt of funds from GSFIC.

SUPPLEMENTAL AGREEMENTS

Supplemental Agreements may be initiated by the Local Government, Contractor, RPM, or GDOT. Supplemental Agreements must be approved by the RPM and TIA Regional Coordinator for conformance with the project budget and scope of services regardless of letting responsibility. All changes in contract amount due to Supplemental Agreements must be reviewed and approved by the RPM to ensure compliance with project budget.

COST OVERRUNS

The RPM shall ensure the project is designed and constructed within budget as shown in the Approved Investment List(s). The RPM is responsible for approving the use of project contingencies regardless of the letting responsibility.

PROJECT CLOSEOUT

Final Inspection

The CEI Provider will follow the requirements as outlined in The Source and Standard Specifications.

Final Audit

The CEI Provider is responsible for completing the Checklist Prior to Requesting Final Audit.

If any of the checklist items have discrepancies, they must be resolved or be in the process of being resolved before requesting a Final Audit. The RPM will make a list of all discrepancies and the status of said items. This list should be attached to the front of the Final Package and marked off by the CEI Provider as each item on the list is resolved. Once all the items have been resolved the RPM will complete the Final Audit.

The Final Audit can be completed without the Materials Certificate being received, but the lack of the Materials Certificate should be noted on the Final Audit. The project cannot be closed out until the Materials Certificate is received from the RPM.

Final Payment

Within four (4) weeks from the date that the project has reported Punch List complete, the CEI Provider will submit the Final Package to the RPM. On resurfacing and asphalt widening projects, the CEI Provider will submit the final package to the RPM within two (2) weeks of completion of the Punch List.

The RPM will notify the TRC that the project is ready for Final Audit. This request comes only after the RPM has thoroughly reviewed the project records using the Project Checklist for Requesting a Final Audit (See the Construction Manual, Project Checklist Prior to Requesting a Final Audit Section 109.08.C in *The Source* on the GDOT website) as a guideline. Immediately on completion of the Final Acceptance, the CEI Provider will send final quantities to the Contractor by Registered or Certified mail.

If the Contractor accepts the statement of final quantities or has no questions within twenty (20) days, the CEI Provider will forward to the RPM the Final Package. If the Contractor questions the Statement within twenty (20) days, the RPM will coordinate with the CEI Provider to resolve any discrepancies.

The CEI Provider will submit the Final Package to the RPM for processing. The TIA Regional Coordinator will process the Final Statement for the Commissioner's certification and will submit it to GSFIC for payment/reimbursement.

As-Built Plans

The CEI Provider will coordinate with the EOR throughout construction to determine if field changes can be completed as a redline change or if Revisions to the Plans by are needed.

The RPM will coordinate Plan Revisions as required and ensure Contractor has the most current set of plans.

Redlined Final As-Built plans should be compiled by the CEI Provider and submitted to the RPM for review and processing through GDOT's Electronic Document Management Office.

Final Acceptance

The Contractor is required to notify the CEI Provider in writing of substantial completion, including the actions completed on the corrections list. The CEI Provider will review the project, verify contractor's statement of substantial completion and notify the RPM.

When all work is substantially complete, the CEI Provider will notify the RPM and TRC that the project is ready for Final Inspection. The CEI Provider will notify the RPM and the contractor when Final Inspection is scheduled so that the contractor's representative can attend.

Final Acceptance recommendation is the responsibility of the RPM. GDOT will make Final Acceptance of each project.

CHAPTER 15: REFERENCES

GDOT Design Policy Manual

<http://www.dot.state.ga.us/doingbusiness/PoliciesManuals/roads/designpolicies/Pages/DesignPolicyManual.aspx>

GDOT Environmental Procedures Manual

<http://www.dot.state.ga.us/doingbusiness/PoliciesManuals/roads/Pages/EnvironmentalProceduresManual.aspx>

GDOT Local Administered Project Manual (LAP)

<http://www.dot.ga.gov/localgovernment/FundingPrograms/Documents/LAPManual.pdf>

GDOT Pavement Design Manual

<http://www.dot.state.ga.us/doingbusiness/PoliciesManuals/roads/Pavement/Pavement%20Design%20Manual.pdf>

GDOT Plan Development Process (PDP) Manual

<http://www.dot.state.ga.us/doingbusiness/PoliciesManuals/roads/Pages/OtherResources.aspx#pdp>

GDOT Prequalification for Contractors

<http://www.dot.ga.gov/doingbusiness/prequalification/Pages/Contractors.aspx>

GDOT Utility Accommodations Manual (UAM)

http://www.dot.state.ga.us/doingbusiness/utilities/Documents/2009_UAM.pdf

GDOT railroads and railroad coordination Policies and Procedures

<http://www.dot.ga.gov/doingbusiness/utilities/Pages/default.aspx>

GDOT Survey Manual

<http://www.dot.state.ga.us/doingbusiness/PoliciesManuals/roads/SurveyManual/SurveyManual.pdf>

Georgia Stormwater Management Manual

<http://www.georgiastormwater.com/>

Guidelines for Geotechnical Engineering Manual

<http://www.dot.state.ga.us/doingbusiness/materials/gagc/pages/default.aspx>

Regional Commission (RC) Boundaries Map

<http://www.it3.ga.gov/Documents/MPOandRCBoundaries.pdf>

The Source

<http://www.dot.ga.gov/doingbusiness/TheSource/Pages/home.aspx>

Transportation Investment Act of 2010 – Approved Investment List(s)

<http://dot.ga.gov/localgovernment/FundingPrograms/transreferendum/Pages/ProjectList.aspx>

Municipal Separate Storm Sewer System (MS4) Permit

http://www.georgiaepd.org/Files_PDF/techguide/wpb/Final_DOT_SW_NPDES_Permit_MS4_Dec_2011.pdf